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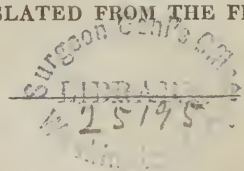
WASHINGTON, D.C.

THE
PRACTICE OF MEDICINE,
ACCORDING TO
THE PRINCIPLES
OF THE
PHYSIOLOGICAL DOCTRINE.

✓
BY J. COSTER, M. D.

Medicamenta stomachum ferè lædunt.—*Aur. Corn. Cels. lib. II. c. II.*

TRANSLATED FROM THE FRENCH.


PHILADELPHIA:
CAREY & LEA.

1831.

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EASTERN DISTRICT OF PENNSYLVANIA, TO WIT.



BE IT REMEMBERED, that on the third day of December, in the fifty-fifth year of the independence of the United States of America, A. D. 1830, CAREY & LEA of the said District, have deposited in this office the Title of a Book, the right whereof they claim as Proprietors, in the words following, to wit:

“The Practice of Medicine, according to the Principles of the Physiological Doctrine. By J. Coster, M. D. *Medicamenta stomachum ferè lædunt.*—*Aur. Corn. Cels. lib. II. c. II.* Translated from the French.”

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D. CALDWELL,

Clerk of the Eastern District of Pennsylvania.

INTRODUCTION.

NOTWITHSTANDING the numerous attacks which physiological medicine has had to sustain from persons educated in the prejudices of an opposite creed, victory has declared in its favour, and it has come gloriously through the contest. Under its influence the healing art has everywhere undergone incontestible ameliorations, and even those who ostensibly are its most determined foes, tacitly adopt its principles, and act upon them in their practice. This policy, at the same time that it gratifies their self-love, subserves the interests of their patients.

Perhaps the author will be charged with inconsistency, as having combated in other writings the doctrine of which he here avows himself the partizan. Such a reproach, however, would be totally destitute of foundation, since he has always subscribed to the fundamental principles of this doctrine, and never entertained any difference of sentiment, except upon certain points; but were the case otherwise, would it be creditable to cherish the paltry vanity, that withholds the avowal of a change of opinion, brought about by observation and more mature reflection? The system of *immobility* in the sciences, and especially in the medical sciences, is an absurdity, since the object of study is to enlarge the sphere of our knowledge, and to rectify erroneous opinions. No kind of credit could redound from the obstinate defence of prejudices and errors known to be such. As for myself, while I express a high sense of gratitude to the founder of the physiological doctrine, for having carried the light of ana-

lysis into the midst of so many opposing systems, the least inconvenience of which was their tendency to produce medical scepticism, I shall say with the same frankness, that I have no intention of surrendering my independence, and that I shall hold myself at liberty to receive, or to reject, all new doctrines, and all new lights that might modify my creed.

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THE
PRACTICE OF MEDICINE,
ACCORDING TO THE PRINCIPLES OF THE
PHYSIOLOGICAL DOCTRINE.

PHLEGMASIÆ,

OR

INFLAMMATORY IRRITATIONS.

EXTERNAL inflammation is generally accompanied by four principal circumstances, which characterize phlegmon, *pain, swelling, heat, and redness.*

Internal has its type in external inflammation.

The absence, however, of some of these circumstances is compatible with the existence of irritation.

By irritation is understood an increased activity of the part in which it is seated. When this irritation is intense, it creates disorders in remote parts of the system, provided the seat of this irritation be not a tissue endowed with little sensibility, and possessed of few sympathies with other organs. These disorders are of various kinds, but the derangement of most frequent occurrence under the influence of an irritation or an inflammation, is *fever.*

Fever never exists but as one of the symptoms of a local inflammation, either internal or external. A whitlow, a boil, an ophthalmia, an angina, and other external phlegmasiæ often produce fever as well as pneumonia, metritis, &c.; yet fever has been considered only an accessory symptom of these topical phlegmasiæ.

Authors, however, have made fever a malady *sui generis*, in other words an essential disease, whenever they have lost sight of the seat of the inflammation which had given rise to this symptom.

Yet analogy would have led to the presumption that these fevers had been produced by the same causes as the preceding—that is, by a local irritation. The problem to be solved then was to discover the seat of the fevers called essential. It has been discovered that this seat is the mucous membrane of the intestinal canal, particularly of the stomach and smaller intestines. The truth of this proposition has been placed beyond contradiction by dissection.

When patients fall victims to fevers called essential, which we shall henceforth call gastrites, or gastro-enterites, the intestinal canal always presents traces of phlegmasia.

Fever produced by irritation of the mucous membrane of the intestinal canal, may assume a thousand different shades, so that it may be difficult to meet with cases of precisely the same character in two individuals. But these diversities of forms or of shades are not indicative of a difference in the nature of the affections; they are only the result of the degree of the phlegmasia, which awakens sympathies varying in number with the age, the constitution, and the irritability of the subject.

Authors have given different names to these shades of fever, and made them so many distinct diseases, having been accustomed to give the name of disease to a certain group of symptoms: thus, there were inflammatory, bilious, mucous, malignant, adynamic, and ataxic fevers, &c.; now, these fevers are nothing but gastrites and gastro-enterites of different degrees in subjects of the sanguine, lymphatic, bilious, or nervous temperament.

As external phlegmasiæ almost always exert an influ-

ence more or less powerful over the mucous surface of the stomach, and as the stomach and intestinal tube possess sympathies with most of the other viscera, and with different parts of the body, so that irritations of the intestinal mucous membrane can hardly exist without giving rise to derangement, more or less marked, of a great number of functions, it is natural to commence the history of the phlegmasiæ with those of the intestinal canal.

IRRITATIONS AND PHLEGMASIÆ OF THE DIGESTIVE TUBE.

GASTRITIS.

Of the different membranes of which the intestinal tube is composed, the mucous is most susceptible of inflammation.

This organ is the seat of a very delicate sense, whose office it is to announce hunger and thirst, and to secrete a juice necessary for digestion. It readily influences other organs, and in its turn is easily influenced by them.

That the mucous membrane of the stomach and bowels is the most frequent seat of irritation, is an incontestible fact, which may be readily accounted for from the numerous causes which act upon this membrane. It is excited—

- 1st. By hunger and thirst.
- 2d. By *ingesta* of every kind.
- 3d. By mechanical agents, blows, contusions, &c.
- 4th. By emanations transmitted by the air.
- 5th. By the *circumfusa*, cold, heat, humidity, light, electricity.
- 6th. By the moral affections.

Symptoms of Gastritis.

Sometimes it is slow in its commencement, and after-

wards makes sudden and rapid progress. This most frequently happens when it supervenes on an old irritation. At other times it manifests at its commencement all the symptoms about to be enumerated.

The patient complains at first of general malaise, of cold, fatigue, and pains in the head. When there are rigors, they are felt particularly along the back and limbs.

Sometimes there are pandiculations at the moment of the accession of the disease. If the irritation increases, the epigastric region becomes sensible upon pressure, and sometimes without pressure; there is a sensation of burning about this region, thirst more or less intense, and a desire for cooling drinks. When the disease is of a higher grade the pains are more intense, the patient vomits, deglutition becomes difficult, and at this period the irritation has arrived at the degree which constitutes inflammation.

The pain does not always correspond to the region of the stomach, but is sometimes referred to that of the liver or spleen, or to some point of the thorax, &c.

The *organic sympathies* manifest themselves by redness of the tongue, especially at its point. The mouth, as well as all the openings of the mucous membranes, is dry; the velum palati is red; the conjunctiva is inflamed; the skin partakes of the state of the mucous membranes, it is dry and burning; sometimes it is slightly moist; this, however, is only at the commencement of the disease, or when it is complicated with catarrh or pneumonia. There is an increased secretion of bile and of the pancreatic juice; an afflux of fluids towards the irritated parts, so that the alvine discharges cease.

Sympathies of Relation.—Pains in different parts of the trunk, in the muscles, in the articulations; head-ache principally about the supra-orbital and temporal region, and about the back part of the head; delirium; wild and incoherent dreams; lesion of the functions of the senses

according to the degree of the disease and the irritability of the individual.

Causes.

All stimulating ingesta, as alcoholic drinks, aromatic substances, those of difficult digestion, irritants, medicines, poisons, hunger, thirst, sudden changes of temperature, external irritation repeated by sympathy in the mucous membrane of the stomach, the metastasis of another irritation to this organ; a slow irritation which has existed for some time, perhaps unsuspected by the patient; fatigue, moral affections of a violent character, such as anger, excess of joy or grief, deep and abiding melancholy. All these causes act with an energy modified by the temperament, the predisposition, and the degree of sensibility of the individual.

Prognosis.

Gastritis supervening upon a slow and ancient irritation, is more dangerous than that which develops itself in a subject that has hitherto enjoyed an immunity from the disease. If no alteration of structure has taken place in the tissues, the prognosis is more favourable. Nature sometimes dissipates the disease by means of a crisis, but this rarely occurs; the disease generally yields with facility to treatment. Violent pain may supervene, accompanied with horrid convulsions, and continual vomiting; this is what authors have denominated cholera morbus. It is the highest degree of gastro-enteritis; at this stage it is dangerous.

Treatment.

Water is sometimes too stimulating, and is rejected by the stomach, but this does not occur unless the disease has reached a high degree of intensity. Rigid absti-

nence. If the stomach rejects drinks, they should be administered in small spoonfuls. We commence with drinks of the most emollient nature, such as gum water, that of mallows, lemonade, orangeade, &c. We apply leeches to the epigastric region; the quantity of blood abstracted must be regulated by the age and strength of the subject, and by the intensity of the irritation. The number of leeches should vary from fifteen to eighty, and upwards. The bites of the leeches should be covered by an emollient cataplasm, the removal of which must not be neglected, should its weight prove oppressive. Should the irritation not be allayed, we recur without hesitation, to a second or third application of leeches. In proportion as the disease abates in intensity, the choice of drinks is less restricted, but those which contain alcohol, aromatics, or any stimulating article, are never admissible. The least imprudence in this respect may cause a relapse.

FEVERS CALLED ESSENTIAL.

ACUTE GASTRO-ENTERITIS.

THE FORM DENOMINATED BILIOUS FEVER.

Symptoms.

It often happens that the irritation, after having predominated for some days in the upper portion of the intestinal tube, invades its lower part. If this irritation confines itself to the stomach or smaller intestines, it is gastro-enteritis, (the fever of authors.) It may also first assail the small intestine, and advance to the superior portion of the canal; or it may manifest itself simultaneously in the two parts.

The pulse is more frequent, and more developed than in gastritis; there is burning heat, thirst, and debility. The tongue is red, and covered with a yellowish coat.

The patient has a great desire for acidulated drinks. The skin, which is at first dry, becomes covered with perspiration, the secretion of bile is increased. The yellow colour of the mucous membranes, and this superabundance of bile have occasioned the name of bilious fever to be given to this form of disease. There is no lesion of the cerebral functions; pressure does not occasion pain, provided the inflammation has not reached a high degree of intensity. The absence of diarrhœa is a proof that the irritation has not arrived at the colon. This form of inflammation presents many shades which it is not necessary to enumerate.

Causes.

The same as those of gastritis. This form of gastroenteritis presents itself more frequently in autumn than in any other season.

Prognosis.

When the disease is mild, it terminates in three or four days; when more intense, it may continue twenty days, and even longer. It is dissipated by copious sweats or abundant alvine evacuations, or without any critical evacuation. In general this disease is attended with little danger, if the irritation is not increased by a disturbing and exciting treatment.

Treatment.

Emetics, which routine practitioners have been in the habit of employing, under the pretext of evacuating the bile, are to be discarded, and as we know that the bile is only an effect of the irritation, we resort to means calculated to allay it, and as a consequence the excessive secretion of bile will cease. If the disease advances, leeches are to be applied to the epigastric and umbilical region; absolute rest should be enjoined.

ACUTE GASTRO-ENTERITIS.

THE FORM CALLED ANGIOTENIC, OR INFLAMMATORY
FEVERS, SYNOCHUS.

The symptoms are the same as those of the preceding form, except that the tongue is redder, the complexion of a deeper colour, and the secretion of bile less abundant. It is absolutely the same affection, but in a sanguine and vigorous subject, without bilious vomiting, and without the yellow colour.

Causes.

All the ordinary causes of gastritis and gastro-enteritis. Persons of the sanguine temperament, whose health is ordinarily vigorous, are more exposed to it than any other class of individuals.

Prognosis.

It is easily arrested, if it is attacked at its commencement, particularly in a subject assailed by it for the first time. It is more dangerous if it supervenes upon an old gastro-enteritic irritation. If we permit it to advance, it may rise to the stage called adynamic fever, and prove fatal.

Treatment.

Rest, abstinence, mild drinks, acidulated, if there be no complication of pneumonia; this exception to the use of acidulated drinks extends to all cases in which the complication of pneumonia exists, as acids have been observed to provoke coughing in these cases. The drinks should be water sweetened with sugar, and ptisan of gum, with the addition of a few drops of sulphuric or citric acid. Leeches to the epigastric and umbilical region, which are

to be repeated if one application does not prove sufficient to arrest the progress of the disease. Emollient injections.

ACUTE GASTRO-ENTERITIS.

THE FORM CALLED ARDENT FEVER, CAUSUS.

Symptoms.

The pains are more violent than in the preceding case, the heat is very intense, the thirst unquenchable, and the pulse exceedingly quick; a violent head-ache accompanies these symptoms, the patient is delirious and tries to escape from the bed. There is obstinate costiveness, and the urine is high-coloured. If the alimentary canal be stimulated, the tongue becomes black and dry. From this group of symptoms, the present form has derived the name of ardent fever, which authors have also considered as an essential fever. It has likewise been called causus.

Causes.

The same as those of the form called angiotenic. The heats of summer contribute powerfully to its production.

Prognosis.

If the patient does not labour under an old gastritis, if his constitution is sound, if the treatment is not of the incendiary kind, and the disease is still in its incipient stage, it may be overcome; but if the contrary is the case, it may justly excite apprehension.

Treatment.

Abstinence; the patient should occupy a cool chamber; local depletion by means of leeches applied to the abdomen; the application of leeches should be preceded by venesection if the pulse is strong, hard, and wirey; emollient

drinks mixed with syrup, or acidulated with sulphuric acid, in the proportion of a few drops to a pint; cold and acidulated applications to the abdomen, if there is no complication of pulmonary irritation, a case in which cold and acids are always contra-indicated. If there be cerebral irritation, cold applications to the head, which should be continued for a long time; acidulated and emollient injections; the warm bath.

ACUTE GASTRO-ENTERITIS.

THE FORM CALLED MUCOUS FEVER.

Symptoms.

We have here the same irritation as in the preceding cases, but in a subject of a lymphatic or mucous temperament, in whom the digestive organs are possessed of little activity. If to the ordinary symptoms of gastro-enteritis be added an inflammation of some of the other mucous membranes, as that of the lungs or the bladder, it will constitute the *mucous fever* of authors. There is anorexia, an incapacity to digest, redness of the tongue; aphthæ often appear in the mouth, in the pharynx, and in other parts; there is occasionally a complication of dysentery, obtuse pains in the limbs, and occasionally in the articulations.

The predisposing causes are the lymphatic temperament, or those constitutions which are remarkable for a kind of *nonchalance* in the movements, and for slight consistency of tissue. A hot and dry temperature, food of an unwholesome kind or deficient in quantity, and the exclusive use of watery drinks, are the most ordinary causes of this disease in subjects predisposed.

Prognosis.

As this form of gastro-enteritis ordinarily announces a lower degree of irritation, it is rarely dangerous. The

danger is in proportion to the activity of the irritation, and of the other affections which may complicate the disease.

Treatment.

The abstraction of blood is less urgently demanded in this than in the preceding cases; still if the irritation advances with rapidity, leeches should be applied to the epigastric region. If there is a complication of catarrh, we apply leeches along the course of the trachea and upon the painful points of the thorax. In case of the existence of diarrhœa, they should be applied on the verge of the anus. Emollient drinks, which may be acidulated if there are no catarrhal symptoms. If the irritation is not of great intensity, we may prepare the drinks with the *graminææ*, but we must beware of using the latter if the thirst be excessive and the tongue very red; aromatics, tonics, and broths are out of the question. Sinapisms and blisters may be resorted to when irritation has been subdued by the antiphlogistic treatment.

ACUTE GASTRO-ENTERITIS.

THE FORM CALLED VERMINOUS FEVER.

Symptoms.

To the ordinary symptoms of gastro-enteritis are superadded those which announce the presence of worms, a sense of titillation in the fauces, at the end of the nose, and at the anus, a strong breath of a sour odour, dilatation of the pupil, sometimes a gnawing pain about the part occupied by the worms. In individuals of great irritability convulsions occur, accompanied by excessive pains in the abdomen.

Causes.

Bad food, an exsanguious constitution, want of cleanliness, and the period of infancy, are the causes which ordinarily give a predisposition to worms. The most frequent cause is inflammation of the intestinal canal, which is peculiarly favourable to their existence. Worms may, however, precede inflammation, and be the cause of it.

Prognosis.

It is rarely a very troublesome disease, provided the irritation is not of old standing, and the worms have not perforated the alimentary canal.

Treatment.

After having combated the inflammation by the antiphlogistic treatment, in the same manner as though the worms had not existed, we administer some oleaginous draught, such as the oil of sweet almonds with lemon juice, taken by spoonfuls. The bitter anthelmintics, such as the helminthocorton, the worm-wood, the artemisia judaica are not suitable, except when there is no inflammation, or when it has been entirely dissipated. Beneficial effects are sometimes derived from the application to the abdomen of cloths steeped in oil, in which a few grains of camphor have been dissolved.

ACUTE GASTRO-ENTERITIS.

THE FORMS WHICH HAVE BEEN CALLED ATAXIC FEVER,
ADYNAMIC FEVER, CAMP FEVER, YELLOW FEVER.

Symptoms.

First form.—When gastro-enteritis advances we observe nervous phenomena of a very irregular kind, such as tremor, delirium, visions, mental alienation, and pain-

ful sensations referred to different parts of the body. As the disease augments in intensity, the patient is agitated, seized with violent convulsions, and incapable of recognising any one; objects appear to revolve around him. From the irregularity of all these symptoms, authors have named this form *ataxic fever*.

Second form.—The eyes fixed and haggard; deafness; the patient is as it were struck with stupor; the tongue at first red, becomes covered with a black coat; the teeth are encrusted with a fuliginous matter; fetid breath; total prostration of strength; agitated respiration; rejection of drink, or if the patient takes it, it falls mechanically into the stomach as it were through a funnel, and sometimes passes into the larynx. As the disease advances, symptoms of putridity arise; fetid excrements and cadaverous smell of the cutaneous transpiration; the skin is covered with livid spots; aphthæ appear in the mouth, both internally and externally; the urine and other excretions are sometimes bloody, and the gums bleed easily. According to the predominance of particular symptoms, authors have given this disease the name of typhus, of camp fever, and of yellow fever. The ataxic form generally precedes the adynamic. Sometimes the adynamic appears at the very commencement of the attack; this takes place especially when it has been preceded by a latent phlegmasia which has suddenly exploded with violence.

Causes.

Gastro-intestinal irritation carried to its highest degree of intensity, the sanguineo-nervous constitution, a hot and moist atmosphere, the moral affections, and in general all the causes of intestinal phlegmasia. The sick confined in considerable numbers in the same place, produce a focus of heat and miasm, which, occasioning the same disease in persons exposed to the contaminated atmosphere, has

given rise to the opinion that the disease is of a contagious nature; this is not the fact.

Prognosis.

The ataxic is less dangerous than the adynamic form, which we may regard as the last grade of the prostration of vital force, induced by an excessive inflammation of the intestinal canal and of the brain. They are both to be regarded with less apprehension at the commencement of the malady than when it has continued for some time. Convulsive symptoms are less dangerous than those of stupor. When irritation has arrived at the last degree which we have described, there is no further hope.

In general, every complication of gastro-enteritis renders it more serious; but the danger is most imminent when it is complicated with cerebral disease, or with peritonitis, or with pneumonia.

Treatment.

If the irritation is primitive and in its initial stage, we attack it with topical depletion at the epigastric region; if it be consecutive, we give emollient drinks, gum water acidulated with sulphuric or citric acid, lemonade; in a word, we employ the antiphlogistic treatment. The abstraction of blood is dangerous when irritation has become very intense: under these circumstances our whole treatment will consist in keeping the patient in a cool atmosphere, and in administering emollient injections together with drinks of the same kind. Tonics and stimulants of whatever kind should be rigidly proscribed, since it is a well known fact that the debility in these cases is only apparent.

REGIMEN OF CONVALESCENTS,

AFTER AN ATTACK OF GASTRITIS OR GASTRO-ENTERITIS.

After the symptoms of irritation have been allayed, the patient is sometimes reduced to a state of extraordinary marasmus, particularly if the disease has been of long continuance. We commence by giving him small draughts of milk mixed with barley water or gum water, or with ptisan of mallows or linden, &c. If the appetite increases, and the tongue is no longer pointed and red, the patient may proceed to broths of a very light quality, the strength of which may be increased as convalescence advances; light soups may be used made with the farinaceous articles, with rice, tapioca, vermicelli. If the patient improves under this regimen, he may be permitted to take comfits, bread, chicken, veal, beef, and the ordinary diet may ultimately be restored: but we must always feel our way with caution, and pay particular attention to the state of the tongue and of the pulse; if the tongue becomes red and the pulse excited under the employment of the prescribed regimen, we diminish the quantity of aliment or withhold it entirely.

ACUTE COLITIS.

Symptoms.

Colitis may either pursue its course alone, or be accompanied by enteritis. If it exists alone, the pain follows a direction from right to left towards the inferior part of the alimentary canal; these pains are accompanied with a sensation of twisting, languor, prostration, shivering, colic, and contusive pains in the arms and thighs. There is diarrhœa with dejections, at first of fæcal, and afterwards of mucous and bloody matters. If the discharge be

of pure blood, colitis assumes the name of dysentery. If the irritation is confined to the colon, fever is an unfrequent concomitant, but it makes its appearance when the whole canal is involved. The pulse is accelerated, small, and wirey, and the thirst excessive; in this case the disease has received from authors the name of putrid, bilious, mucous, or inflammatory dysentery, with ataxic or adynamic fever, according to the grade of concomitant gastro-enteritis.

Causes.

The causes of colitis are nearly the same as those of gastro-enteritis. There are some substances, however, which pass through the superior part of the intestinal canal without producing irritation, and which select, as the sphere of their action, the inferior part of this tube. Suppression of the cutaneous transpiration, cold, a transfer of irritation by metastasis, unripe fruit, laxative articles of diet, fatigue, long and forced marches, the immoderate use of purgatives, especially of those of the drastic kind, are the ordinary causes of gastritis. To these may be added irritation, originally seated in the upper part, and translated thence to the inferior portion of the canal.

Prognosis.

Attacked in its forming stage, colitis is dissipated with the greatest facility. It is seldom dangerous, unless under circumstances of great acuteness. In this case the violence of the pain, and not of the inflammation, may destroy the patient. If it is complicated with gastro-enteritis, or any other irritation, the derangement varies with the intensity of the concomitant malady, and the constitution and strength of the individual.

Treatment.

Leeches applied to the margin of the anus, to the number of fifteen, twenty, thirty, or forty, promptly remove the disease. If there is a gastric or gastro-enteritic complication, recourse should be had to cupping or leeching over the affected part. These means must be seconded by diet and mucilaginous drinks. If the irritation extends to another part, it must be pursued with repeated applications of leeches to the painful points.

When colitis has diminished in intensity, and there is no fever, we very often succeed in dissipating it by the use of sago, arrow root, or tapioca jelly. Tonics, astringents, and opium, are not remedies upon which we can place our dependance; we may, however, have recourse to them when the irritation is nearly subdued.

CHRONIC PHLEGMASIÆ OF THE INTESTINAL CANAL.

CHRONIC GASTRITIS AND GASTRO-ENTERITIS.

In the acute, as in the chronic state, the phlegmasiæ of the digestive tube present many shades of difference. This diversity may be derived from the intensity of the irritation; from the temperament of individuals; from age and sex; from alterations produced in the diseased tissues; from an inflammation of long standing, and, lastly, from the seat of the affection.

First shade of Chronic Gastro-enteritis with the form called slow Fever, slow Nervous Fever, Tabes Mesenterica, Atrophia Infantilis.

Symptoms.

Febrile pulse, lassitude, prostration, heat, thirst, heat about the epigastrium, redness of the tongue. If there

is no colitis the patient is constipated; the conjunctiva is red; the circumference of the eyes is of a bluish tint; the skin is wrinkled, and as it were glued to the muscles; the urine is high-coloured, and deficient in quantity; the exacerbation, which occurs in the evening, is accompanied with sweats, particularly if the complaint is complicated with pulmonary irritation. All the febrile symptoms are aggravated on the approach of evening. The patient often enjoys a respite from his complaints in the morning; he can attend to his affairs, and feels no disgust for food. As the disease advances, the loss of flesh becomes extreme, this is what is denominated *slow fever*; if there is cerebral irritation, or convulsions, it is called *slow nervous fever*; if there is tension of the abdomen, or a complication of colitis, it is named *tabes mesenterica*. In children it constitutes *atrophia infantilis*.

Causes.

All those of acute gastro-enteritis; but we may remark that this form, which we call sub-acute, is often the result of the bad treatment of the acute state.

Prognosis.

The termination of the disease varies with the duration and intensity of the malady; the sensibility of the subject; the treatment employed; and the alterations produced in the tissues, which are the seat of the irritation.

A cure is more easily effected in those who have not experienced many relapses, and who have not used stimulants improperly. Febrile gastro-enteritis, consecutive to the acute state, is much more difficult to cure than that which is premature, on account of the alterations which attend it. If there is engorgement of the glands, of the liver, or of the spleen, the disease is obstinate, but not desperate, provided we refrain from stimulants. Con-

siderable loss of flesh; ecchymoses; and scorbutic petechiæ are of an ominous character. If the patient loses his appetite; if he continually vomits up whatever he swallows; if diarrhœa supervenes upon all the other symptoms of debility, there remains but little hope.

Second shade of Chronic Gastro-enteritis, with a pain which is called Hepatic, Splenic, Phthisical.

Symptoms.

They differ but little from those of the preceding shade. Slow digestion, accompanied with a slight febrile excitement. Some relief seems to be derived from the administration of stimulants, with the view of aiding digestion, but in a short time the complaints of the patient are renewed, and if he continues the use of these medicines, his state becomes more harassing every day. There is a deep sallow tint of the skin; pain is complained of in different regions of the body; between the shoulders; at the cardiac region; in the liver; the spleen; and about the shoulder blades. This pain is called hepatic, when it is seated about the right shoulder; splenic, when about the left; and phthisical, when between the shoulders. We must beware of confounding these different forms of chronic gastro-enteritis with primitive affections of the liver, the spleen, or the lungs.

Causes.

The same as those of the preceding shade.

Prognosis.

From a bold and unsparing employment of stimulants, the patient will imagine himself better; this, however, will be at the expense of increased suffering, after the cessation of their action; but by a persevering use of demulcents, a

gradual restoration to health will be effected. The danger varies, as in the preceding shades, with the intensity and duration of the disease, and the lesions produced by the irritation.

Third shade of Chronic Gastro-enteritis.—Cynorexia, Boulimia, Hypochondriasis.

Symptoms.

In this shade gastro-enteritis is not always accompanied with fever. There is redness of the point of the tongue; this is sometimes the only symptom, but most frequently it is attended with heat of the stomach. The state of the skin corresponds with that of this organ, and of the tongue. If the stomach is inflamed, the colour of the skin is higher, and the conjunctiva is redder. If we direct our attention to the seat of inflammation, we find the digestive process accelerated, but attended with pain; this is what is called *boulimia*. There is sometimes dyspnœa; a cough called gastric; palpitation; constriction of the heart; a sense of fullness and expansion of the heart, together with throbbing so great as to resemble aneurism. If irritation advances, the power of digestion is impaired, and although the patient eats with voracity, yet, he continually approaches a state of atrophy. In some subjects the urine is high-coloured and *lateritious*. If the patient is free from colic, he suffers from obstinate constipation. He is sensibly relieved by alvine evacuations, to procure which, he employs purgatives of every kind. From these he derives benefit at first, but they ultimately cease to produce the same effect, and increase the disease by adding to the existing irritation. The symptoms present infinite varieties, and are so inconstant, that it would be impossible to produce an exact monograph of them. It is certain, however, that all the organic symptoms, and those of re-

lation, originate in inflammation of the stomach, since the application of leeches over this viscus, and a reduction of the food, together with a complete abstinence from all irritating and stimulating ingesta, have the effect of arresting the disease.

If the irritation continues, the patient becomes thoughtful and melancholy, and is constantly absorbed in the contemplation of his own feelings; this constitutes hypochondriasis, a disease which varies extremely in its form. The following are the ordinary symptoms: dyspnœa, slow and painful digestion, eructation, flatulence, rumination, violent spasm of the stomach, hiccough, a sensation of constriction, of twisting at the region of the stomach, borborygmus, the sudden development of a gas in the stomach, or the agitation of a fluid which the patient compares to a ball. Sometimes hypochondriacs think they can perceive their food in the act of passing the pylorus; by concentrating their attention upon the interior of their bodies, they acquire so extraordinary a tact, that no internal movement, however slight, can elude their observation. There are some who distinctly perceive the pulsations of the abdominal arteries. They universally believe that their disease is without a parallel, and it certainly is true that no two individuals can be found whose symptoms are perfectly identical. Those symptoms, however, which are indicative of gastric and enteritic irritation, are always found to exist, but the sympathies of the local irritation vary with constitution, age, sex, and occupation.

Hypochondriasis does not then exist only in the mind of the patient, although this opinion has been held by some medical men, who, unable to assign either the seat or the cause of the malady, have preferred denying its existence to acknowledging their ignorance.

Prognosis.

This shade of gastro-enteritis is most frequently met with among persons in affluent circumstances, who live well, and are addicted to the use of generous wines and alcoholic drinks. The bilious temperament predisposes to this disease; we, however, meet with it sometimes in scrofulous patients, who have been treated too freely with stimulants and tonics. There are individuals in whom we observe all the symptoms of hypochondriasis without the concurrence of these causes, yet this is an uncommon occurrence.

Treatment.

If the antiphlogistic treatment is pursued, the disease will gradually disappear, but if the employment of all kinds of stimulants be persevered in, a treatment which has hitherto been almost universally resorted to, it will indubitably terminate in the development of an acute gastro-enteritis, which will be attended with greater danger from the circumstance of its supervening upon a chronic one.

*Fourth Shade of Chronic Gastro-enteritis.—Scirrhus and Cancer of the Stomach.**Symptoms.*

These are common and peculiar symptoms: the common are those of gastritis; the peculiar are those which indicate the presence of scirrhus. Its seat is the cardia, the pylorus, and occasionally some other part of the stomach. When the cardiac orifice is affected, there is pain and heat about the region of the heart; the heat is greater at the throat, and is immediately relieved by cold drinks. This tumour cannot be certainly discovered by the touch. At the pylorus the existence of the disease is more easily as-

certained by feeling; but still it may readily be confounded with other tumours which may be developed in the vicinity. Our doubts as to the nature of the disease are dispelled when to the other symptoms are added embarrassed digestion, pain, regurgitation, and vomiting. Nevertheless, the food sometimes passes along in small quantities, notwithstanding the existence of scirrhus pylorus. In some cases the stomach does not reject the food unless it is taken in large quantities. In addition to these symptoms, the colour of the skin is dull, and presents the aspect which is called cancerous. It is difficult to pronounce upon the existence of scirrhus in the parietes of the stomach, even when a tumour is perceptible to the touch, because the gastro-colic epiploon may occasion the same sensation, when it is folded upon itself or engorged: we can only be assured of the existence of a tumour in the neighbourhood of the stomach, which may be a glandular, an adipose, or a scirrhus engorgement. But when it is accompanied with pain, and with a vomiting of acid, acrid, or dark-coloured matter, and with laborious digestion, the diagnosis is more certain. In fact, it is sufficient to know that there is irritation of the mucous membrane of the stomach, the particular mode of degeneration is only probable. During the existence of these symptoms, the patient loses his flesh, is sad and disconsolate; his condition is painful, and difficult to describe. It sometimes happens that a phlegmasia, involving the whole digestive tube, succeeds the local inflammation. This phlegmasia is marked by the same symptoms as ordinary gastro-enteritis, viz. acute fever, red tongue, thirst, dry skin, general prostration, and marasmus.

Causes.

The predisposing causes are the lymphatic temperament, and errors of diet. The occasional causes are gas-

tritis, which determines an afflux of fluids to the irritated part, super-nutrition of the irritated tissue then takes place, whence arises the development of tumours which are hard, lardaceous, &c.

Prognosis.

The prognosis is generally unfavourable, if the digestion is very difficult, and to the well-ascertained existence of tumour are added the usual symptoms of gastritis. Inflammation sometimes perforates the parietes of the intestinal canal, and attacks the peritoneum. A violent peritonitis suddenly supervenes, to which the patient in a short time falls a victim. We may almost always be assured that perforation has taken place, when, after a long continuance of suffering, we witness the supervention of peritonitis and sudden death.

Treatment of Chronic Gastritis and Gastro-enteritis, with their different Shades.

Chronic febrile gastritis and gastro-enteritis, not originating in the acute form, require for their cure the same treatment as the acute. When they are consecutive to the acute state, the treatment requires certain modifications. If gastro-enteritis is only a continuation of acute gastritis, we must insist upon the prolonged use of a rigid diet and antiphlogistic remedies. If the patient is of robust constitution, the occasional application of twenty or thirty leeches to the epigastrium will be proper. But topical bleeding is contra-indicated by the existence of organic lesion discovered by tumefaction and hardness of the abdomen, intestinal pains, cancerous complexion, continuance of accelerated pulse. Patience, time, and a mild diet are the only means from which we can reasonably expect a happy result.

Treatment of Cholera Morbus.

When chronic gastro-enteritis presents itself under the form of cholera morbus, that is, when there is violent vomiting of matter charged with bile and mucosities, accompanied with acute pain at the epigastric region, with convulsions and cramps, especially after vomiting, we must not have recourse to tonics and excitants, for in this disease, even when there is an absence of fever, we have to treat an irritation of the stomach, as dissection demonstrates.

The indication is to allay the irritation of the stomach by cooling drinks, and particularly by local bleeding over the viscus, yet if the patient is prostrated, if the vomiting has continued three or four days before the physician is called in, if the face is haggard, and the pulse weak and fluttering, we must abstain from bleeding and adhere to emollient drinks. Sometimes the patient rejects all except water moderately sweetened with sugar, or even pure water, taken only in single mouthfuls. Emollient cataplasms are applied over the epigastric region, and the feet and hands are immersed in water rendered stimulating with mustard. In some cases drinks should be entirely prohibited, as a single spoonful of simple water exasperates the symptoms. Our remedial means are then confined to the administration of small emollient injections, to which may be added a few drops of laudanum. Advantage is sometimes derived from the application of ice to the epigastrium, while the extremities are kept warm. After the employment of the antiphlogistic treatment, when the redness of the tongue has diminished, an opiate draught may be administered.

If the disease passes from the chronic to the acute state, it is to be treated as an acute gastro-enteritis.

Treatment of Tabes Mesenterica, and of Congestions of the Liver and Spleen.

Formerly, when a patient digested badly, and had an enlargement of the liver or spleen, or a tumour in any other part of the abdomen, he was dosed with pretended deobstruents, such as saponaria, wild succory, and purgatives, and if there was no fever, with quinine and many other kinds of tonics and stimulants. Whether fever exists or not, this kind of medication is improper; we must address our remedies not to symptoms, but to the primitive seat of the irritation. We must therefore employ only the antiphlogistic method, any other treatment is absurd and dangerous. If this disease commences with the acute state, or from the chronic turns to the acute, the treatment must be the same as in acute gastro-enteritis.

Treatment of the shade called Boulimia, Cynorexia.

Antispasmodics and tonics only increase the appetite, by augmenting the irritation of the stomach, which is the cause of it. The indication is, therefore, to administer the insipid milky emulsions in large doses, prohibit high-seasoned food, and the vinous, bitter, or aromatic drinks. If we persevere in this treatment, the tongue at first becomes red, white, broad, and moist, the patient falls into a kind of languor, and advances gradually towards a state of health. The demulcent treatment, consisting of mucilaginous and feculent substances, must be kept up for some time; and when the symptoms of gastritis have been entirely dissipated, we return gradually to the ordinary regimen.

Treatment of Hypochondriasis.

We must not lose sight of the fact, that hypochondriacs exaggerate their complaints, from having their attention

constantly directed to their viscera; but on the other hand, we must beware of believing that all their distress is imaginary. They are undoubtedly affected with an irritation of the digestive tube, which reacts upon the brain. This occasions the nervous symptoms, and the kind of monomania under which they appear to labour. We should then put them on a mild and vegetable regimen—a milk diet, if they digest it with ease. We prescribe moderate exercise, travelling, diversions, bathing, watery and unexciting beverages. If there be obstinate constipation, or the suppression of habitual hæmorrhoids, we apply, from time to time, ten or twenty leeches to the verge of the anus, particularly at the customary period of the sanguineous flux; to this treatment we add emollient injections.

ACUTE PERITONITIS.

This is an acute inflammation of the peritoneum: it may involve the whole membrane, or one or more parts of it. The opinions of the ancients with regard to this affection, were very vague. What they regarded as peritonitis, was nothing but colitis or enteritis; for their description of it is precisely the same as that of the latter phlegmasiæ. Peritonitis is never accompanied by diarrhœa; this is one of its characteristic features; now, the old writers continually mention diarrhœa as attending it; which proves their total ignorance of peritonitis in the proper acceptance of the term.

The peritoneal membrane, though destitute of sensibility in a state of health, yet possesses it to an extreme degree in the pathological condition. This membrane is less subject to inflammation than those which are possessed of sensibility to a greater degree.

Symptoms.

The symptoms are either local or sympathetic. The first are, burning pain, of a sharp and lancinating character, by which circumstance it is particularly distinguished from colitis. The diagnosis is likewise assisted by pressure, which sometimes becomes insupportable, to such a degree that the patient cannot endure the weight or contact of the clothes; this is not the case in colitis or enteritis.

Sympathetic symptoms.—A small and hard pulse. The muscular apparatus appears to be in a state of constriction.

Peritonitis pursues a rapid course; in one, two, three, or at most four days, it attains its maximum of intensity. Obstinate constipation, the administration of injection being attended with pain and difficulty; ordinarily a tumefaction of the abdomen, which is renitent under pressure; muscular tremors; the knees are flexed upon the trunk; the pulse increases in rapidity; vomiting may occur; the tongue is sometimes of a blood-red colour. Finally, delirium supervenes, with total prostration, obtuse sensibility, and all the symptoms of *ataxy*. In puerperal peritonitis the tongue is foul; the abdomen soon becomes tense, because the system has many humours to be evacuated, an afflux of which to the irritated parts always takes place.

We sometimes see peritonitis deriving its origin from a stomach irritated by the exhibition of emetics; or from a colon suffering in consequence of drastic purgation.

Causes.

Blows upon the abdomen, straining, the shock of violent coughing, vomiting, a contiguous phlegmasia which lights up irritation in the peritoneum, a perforation of the stomach, of the intestines, or of the gall-bladder, giving

rise to extravasation into the peritoneal sac of substances to which it is not accustomed.

Sometimes peritonitis is consecutive to a phlegmasia of the intestinal mucous membrane; then the peritoneum becomes inflamed at certain points, corresponding to the seats of the mucous irritation. Peritonitis consecutive to inflammation of the intestines, can only be accounted for in this manner. Inflammation of the mucous membrane communicates itself first to the muscular coat of the intestine, it then attacks the cellular, and afterwards the serous membrane, or else it assails the womb, the bladder, the kidneys, &c. We seldom meet with primary peritonitis.

Puerperal peritonitis is frequently encountered as the consequence of laborious delivery, or of the retention or the suppression of sanguineous evacuations. The barbarous custom of administering hot wine and other tonics immediately after delivery, may give rise to inflammation of the womb, and, as a consequence, to that of the peritoneum.

Prognosis.

This is one of the most dangerous inflammations. It is never cured without the assistance of art, but sometimes the efforts of art, badly directed, accelerate its ravages.

If the subject be of a very irritable temperament, the heart may labour under constriction to such a degree as to give no indication of fever.

Should fever make its appearance after the employment of antiphlogistics, it is a favourable sign; it is a proof that the constriction has ceased.

Treatment.

It should be of the most active kind. The inflammation should be dissipated before the peritoneum becomes encumbered by the accumulation of its own excessive secre-

tion. General and local blood-letting. If there is constriction of the pulse, or if the peritonitis is violent, venesection must always precede the application of leeches; in fact, this procedure is advantageous in all cases. The tension of the abdomen would with difficulty yield to the application of leeches alone.

We must afterwards pursue the peritonitis with the application of leeches to every part of the abdomen to which the pain is translated, and in which it manifests itself.

The number of leeches must be considerable, otherwise the inflammation will advance with rapidity. From thirty to one hundred may be employed at once, or at two or three different times, according to the age and constitution of the patient, and the intensity of the inflammation. The warm bath.

Fomentations are employed, but with prudence and reserve.

Lavements are useless, and sometimes dangerous; they always awake pain or augment it.

CHRONIC PERITONITIS.

It may be consecutive to the acute stage of peritonitis, yet when the disease is very acute it rarely becomes chronic, as it is either promptly cured, or rapidly terminates in death. It may likewise be primitive.

Symptoms.

Peritonitis, primitively chronic, is hardly ever accompanied by fever: the reverse is the case when it is consecutive to the acute state.

Tumefaction of the abdomen with resistance to pressure; constipation, owing to the pain of the peritoneum opposing the peristaltic movements of the intestines. The patient sometimes has a deceptive feeling of a want to

evacuate the bowels. The same thing occurs in other cases; in irritation of the bladder the patient thinks he experiences the want to pass his urine; in irritation of the stomach he experiences a deceptive call to stool, &c.; this takes place because the irritation determines a sensation analogous to that produced by the presence of foreign substances in the part affected.

Causes.

Pressure, falls, straining in coughing, efforts in raising weights, pains of the belly; perhaps rheumatism may be enumerated among the causes.

Inflamed ovaria often occasion chronic peritonitis.

It may succeed a chronic pleurisy, or it may be the effect of it, and *vice versa*.

Prognosis.

Chronic peritonitis may be mortal in two ways—by dropsy, or by marasmus, with hardness of the abdomen.

Dropsy supervenes after the lapse of a variable time. Marasmus is a necessary consequence of the defect of nutrition, resulting from peritoneal inflammation, which injures the functions of the intestines.

Rupture of the peritoncum is sometimes observed as a consequence of chronic gastritis or peritonitis. In this case a tympanites supervenes, which must not be confounded with dropsy. The fatal issue is then at hand.

Fluids extravasated in the cavity of the peritoneum, have been observed to be very promptly absorbed, and particularly when an inflammation has occurred in another part. *Ubi dolor, ibi fluxus*. It is for this cause also that fluids accumulate in the peritoneum when it is the seat of an irritation.

Treatment.

This disease is never cured without the assistance of art. The resources of medicine are, however, unhappily very few. The antiphlogistic treatment is first to be tried, and the regimen is to be regulated in the same manner nearly as in chronic gastritis.

Gentle diuretics are sometimes in place here.

When the subject is strong and muscular, the duller faculty of observation will perceive the propriety of the abstraction of blood. If the flesh is flaccid, and the subject weak, blood-letting is contra-indicated.

Medicinal soaps, bitters, alkalies, avail nothing—absolutely nothing. Milk, fresh vegetables, cooked fruits, light farinaceous sops, water for drink: these articles, and nothing more stimulating, should be employed.

INFLAMMATION OF THE LIVER.

HEPATITIS—ICTERUS.

Hepatitis consists in an inflammation of the liver. It is idiopathic or sympathetic. Falls, foreign bodies, violent concussions, produce the former kind.

The second or sympathetic, which is of much more frequent occurrence, is almost always produced by stimulation of the intestinal canal.

Hepatitis is much more rare than it has been represented to be by authors: duodenitis and hepatitis have been by them mistaken for this disease.

In inflammation of the brain, the liver is sometimes found to become inflamed by sympathy; for as the mucous membrane of the digestive organs exercises an influence over the brain, so in return does the brain operate upon the mucous membrane of the intestines, and consequently upon the liver.

The bile may be poured into the duodenum in abundance, although there be no inflammation of the liver. The stimulation of the excretory ducts of the liver is sufficient to produce this effect, for, according to the observation of Bichat, the secretions are more abundant when these ducts are stimulated: this takes place in duodenitis, when the orifice of the ductus choledochus is inflamed. But the bile sometimes cannot be excreted on account of a spasm of this orifice; it is then absorbed, and gives rise to icterus.

Pains, tumefaction in the region of the liver, varying according as the inflammation is superficial or deep-seated. Nausea, bitter taste, tongue greenish, and red at the point, constipation, urine depositing a lateritious sediment, the skin covered with perspiration, and often of a sallow tint. The jaundiced colour, or icterus, does not occur except when the bile cannot flow freely through the excretory ducts.

Prognosis.

It sometimes terminates by an epistaxis, which generally occurs from the right nostril. Suppuration and concretions may occur, or it may pass into the chronic state.

Treatment.

This disease should not be abandoned to nature. Good effects are obtained from leeches, if there is not as yet a fuliginous state of the mouth, and if peritonitis or prostration has not occurred. They should be applied in great numbers, for example, forty, fifty, sixty, eighty, or one hundred, according to the age and strength of the patient, and the intensity of the inflammation. If acute hepatitis be preceded by chronic gastritis, or hepatitis, which fre-

quently happens, the cure will be difficult, and perhaps impossible.

Neither emetics nor blisters are to be employed.

Leeches, or cupping, and slightly acidulated demulcent drinks, are the only remedial means indicated. The diet must be more or less severe.

If an abscess opens externally; if a fistula is established; the case is to be treated in the same manner as any other abscess.

CHRONIC FEBRILE HEPATITIS.

It is impossible to establish the diagnosis of the different lesions which supervene in chronic hepatitis. Is there abscess, ulceration, calculi? The determination of these questions is of no practical utility, for we can never be assured of these states, until dissection reveals them.

All that it is essentially useful to know is, that chronic hepatitis is an inflammation of the liver, distinct from gastritis and peritonitis.

Prognosis.

Chronic febrile hepatitis is always a serious disease.

Change of structure in the liver does not alone produce death, but the latter is occasioned by the digestive organs participating in the irritation, or by their being its primitive seat.

Chronic febrile hepatitis terminates frequently in dropsy or marasmus.

On dissection, abscesses, cysts, ulcerations, perforations of the liver, and biliary calculi, are discovered. It is seldom that deep abscesses make their way to the exterior.

CHRONIC HEPATITIS,

NOT FEBRILE.

It is this disease that has been called by authors *engorgement* of the liver: the name of sub-inflammation appears more suitable.

It makes its appearance often as a sequela of intermittent fever.

In tumefactions of the liver, there is almost always complication of duodenitis and jejunitis.

The case of livers affected with a fatty degeneration, is nothing more than hepatitis of this kind, generally occasioned by duodenitis.

Prognosis.

If the liver is alone the seat of irritation, there is hope, but the danger increases if the inflammation involves the digestive tube; in this case the present form becomes assimilated to the preceding.

Treatment.

Antiphlogistics and revulsives. If the disease is not very intense, local depletion by leeches or cups over the region of the liver.

We should abstain from leeches, if there is vomiting and anorexia. In other respects the treatment is the same as that of chronic gastritis.

Bitters, myrrh, aloes, aromatics, the deobstruents, acrid substances, the pills of *Morton*, so extravagantly lauded, should be rejected as so many poisons.

The thermal waters, administered internally, are often injurious. If recourse is had to these means, it should be done in such a manner that the stomach be not irritated.

Douching over the seat of the affection has sometimes produced very good effects.

After the administration of antiphlogistics, we may employ moxa, issues, blisters, mercurial frictions, from which great benefit has been derived in this case.

But the most suitable measure is to employ with unwearied assiduity mucilaginous drinks, and a mild and light regimen, which in some cases must be continued for years.

INFLAMMATION OF THE SPLEEN.

SPLENITIS.

The spleen is an appendage of the digestive organs, which appertains entirely to the circulatory apparatus, and has very little sympathy with other organs.

We sometimes meet with enlargement of the spleen as a consequence of intermittent fever.

The moral affections may also suddenly give rise to an extraordinary tumefaction of this organ. This is a true sanguineous congestion. Inflammation of the spleen, whether acute or chronic, is not very painful; its treatment is absolutely the same as that of gastritis.

The case is the same with regard to the pancreas, the affections of which it is very difficult to determine during life.

PHLEGMASIÆ OF THE URINARY APPARATUS.

(KIDNEYS AND BLADDER.)

The reins and the bladder are susceptible of peculiar irritations. The treatment appropriate to them is likewise peculiar. We shall treat first of the kidneys.

The kidneys, like most of the secretory organs, have many sympathies with other parts of the body. Irritation of the kidneys is with facility transmitted to the bladder,

and *vice versa*. Violent passions may give rise to affections of the kidneys. The too frequent employment of certain diuretics, as nitre, camphor, cantharides, spirituous drinks. All the diseases of the abdomen may affect the kidneys: they may also become the seat of a metastasis.

Youth and old age are more subject to this disease than the middle period of life; and men more than women.

Falls, long confinement to bed, devotion to study, favour the development of this affection. In fact, there are no diseases to which excess in study, in the pleasures of the table, and in venery, may not give rise. Inflammation of the kidneys is called nephritis. It is acute or chronic.

ACUTE NEPHRITIS.

Symptoms.

Pains in the region of the kidneys, more or less acute, but sometimes atrocious; pressure renders them more intense; sometimes a slight tumefaction of the diseased side is perceptible.

This inflammation may be reflected on other organs in two opposite directions: there may arise from it pain of the testicle, and retraction and pain of the spermatic cord. The irritation is often repeated in the stomach; this constantly occurs when the inflammation is very intense. Besides the signs of nephritis, we then meet with all the signs of gastro-enteritis. In the acute stage the urine is ordinarily bloody, and in small quantity, or suppressed; there are pains of the bladder.

This inflammation is not ordinarily very intense, except in case of violence produced by a foreign body; it may then rise to the degree of phlegmon, and manifest itself by all the ordinary symptoms that characterize this affection, such as throbbing pain, full pulse, &c.

It is not, however, to be understood that phlegmon never occurs, under the influence of other causes than those enumerated.

Prognosis.

The acute stage is cured, or passes into the chronic. This phlegmasia does not by itself occasion death; the fatal issue is owing to the gastritis which precedes or follows it; sometimes it is in consequence of peritonitis. This last species of nephritis is rare. When prostration occurs, it is a sign that the inflammation has deeply affected the mucous membrane of the intestines, as in all the cases in which irregular nervous and adynamic symptoms supervene in the train of any irritation whatever.

Treatment.

In the acute state, local bleeding; if inflammation is very intense we must commence with general blood-letting. For drink, decoctions of mallows, flaxseed, of milk, of sweet almonds. If the pain is violent, if spasms and convulsions occur, we may give ether or laudanum in a large quantity of water.

Warm bath. To derive advantage from this, the patient must remain in it for a long time. Too hot or too cold, it is dangerous.

Constipation must be obviated by the administration of emollient enemata.

Camphor may be employed in irritations of the kidney, yet we should use it with caution, or rather abstain from it in the very acute state.

If there is hæmorrhage, it should not be arrested by astringents, but the demulcent treatment is to be continued.

CHRONIC NEPHRITIS,

AND NEPHRITIC COLIC.

It is ordinarily consecutive to the acute, and does not differ except in the intensity of the symptoms. Yet it sometimes happens that there is no acute state, and that the disease commences by an attack of nephritic colic, which leaves in the interval a more or less decided state of suffering, continuing until the exacerbation appears again.

Symptoms of Nephritic Colic.

Pains in the lower part of the flank, extending along the spermatic cord to the testicle, and even to the thigh, loss of appetite, nausea, vomiting, heat and swelling in the region of the kidney, as in acute nephritis. The difference is that the frequency of the pulse is less considerable. The colics resemble much those of the colon. The pains become lancinating and penetrating in the region of the kidney. Sometimes convulsions of the superior extremities occur. The patient writhes with agony, moves from place to place, despairs of recovery, and presents a deplorable aspect.

The duration of the attack is entirely indefinite; it may continue whole days and even weeks; at other times it ceases after the lapse of a few minutes. After some time the urine carries along with it gravel, and the disease often terminates after their evacuation. The patient afterwards enjoys comparative ease.

The return of the attack is determined by atmospheric vicissitudes, strong moral affections, cold feet, excess in spirituous drink, violent exercise, coitus, and all the ordinary causes of acute nephritis.

Nature of Nephritic Colic.

It is an irritation of the kidneys, which sometimes, but not always, gives rise to calculi. It is incorrect to attribute it in every case to the sole cause of calculi in the kidneys and in the ureters. These calculi are in the first place the effect of irritation before they become its cause. It often alternates with gout, rheumatism, the catamenia, hæmorrhoids, herpes, and other cutaneous eruptions.

Prognosis.

The disease may disappear if it is attacked before alteration of structure supervenes; it may be replaced by another irritation; it may persist in the kidney, render it tuberculous, produce in it calculi, transform it into a kind of sac which fills the abdomen, and which contains a variable quantity of urine; it may produce scirrhus, or cancer of the kidney, and bring on dropsy. Finally, it may give rise to irritation of the principal viscera, to marasmus, and death.

On dissection we discover the kinds of alteration of which we have just spoken.

Treatment of Chronic Nephritis, and of Nephritic Colic.

The same as that of acute nephritis: leeches over the region of the kidney to the number of twenty, thirty, forty, or fifty, emollient cataplasms, fomentations and enemata, demulcent drinks, a slightly camphorated emulsion, frequent warm bathing, mild milk diet, mental and corporeal quietude. If, notwithstanding repeated bleedings and the antiphlogistic regimen, the colic continue, if the pains extend to the spermatic cord, and if there be convulsions and vomiting, we should suspect the presence of a stone in the ureter: in that case we strenuously enforce the employment of baths, enemata, and the oleagi-

nous preparations, which, by keeping up an open state of the bowels, favour the passage of the calculi. We may try pills of soap, the balsam of copaiba, diuretic drinks; but these should not be resorted to until after the employment of the antiphlogistic regimen.

To prevent a return of the attack, the patient should use a mild diet of vegetables and milk in moderate quantities, he should take gentle exercise, and abstain from spirituous liquors and venereal excesses. The employment of the mineral waters which contain carbonic acid may be useful as a diuretic. The thermal sulphurous waters, used in douches upon the region of the kidney and in drink, may, with the balsamic substances, act in an effectual manner. These means are especially appropriate to the case of lymphatic and exsanguious subjects; but if the constitution is dry and nervous, if there is constipation, and a sense of burning in the bladder, if the urine is high-coloured and scalding, the internal use of the thermal waters will only exasperate the irritation. Our treatment must then be confined to antiphlogistics. When the pains persist obstinately, notwithstanding the treatment, and the urine is altered from its natural state, thick, purulent, dark-coloured, and we have reason to believe there is alteration of the organ, stimulants are contra-indicated. The antiphlogistic regimen, a few grains of camphor combined with opium to alleviate pain, and the mildest diuretics, are the means to which we should have recourse. Camphor and opium may be used in fomentations over the kidneys, if the internal employment of them augments inflammation.

When chronic nephritis can be traced to the recession of a cutaneous eruption as its cause, besides the emollient treatment indicated above, the thermal waters in douches are employed with success; revulsives, such as the moxa, dry cupping, blisters, made without cantharides, the employ-

ment of which is never proper in the phlegmasiæ of the urinary apparatus, on account of the irritation which they determine in the kidneys or in the bladder. Finally, if nephritis is accompanied with the suppression of an habitual hæmorrhage, the means proper to restore this evacuation must be resorted to. However, as the suppression of a hæmorrhage is more frequently the effect than the cause of an irritation, this hæmorrhage would reappear spontaneously on the cessation of the phlegmasia.

ACUTE PHLEGMASIA OF THE BLADDER.

CYSTITIS.

Symptoms.

Continued burning and lancinating pains in the region of the bladder, frequent discharge of urine, dysuria or ischuria, sometimes a tumour above the pubis, vomiting and tenesmus. A greater or less number of these symptoms may be met with, or they may present some particular shades, according to the intensity of the disease, or the irritability of the subject. Sometimes the irritation fixes itself on the mucous membrane, it then receives the name of catarrh: this often passes into the chronic state.

Causes.

All those of inflammation, and particularly those which act directly upon the bladder, such as cantharides, spirituous drinks, external violence, calculi, urine retained too long, and distending the bladder, irritations of the canal of the urethra, which sometimes extend to the mucous membrane of this viscus, phlegmasiæ of the kidneys, in which the bladder readily participates, as well as in those of the verge of the anus, or of the rectum, of the vagina, and of the uterus.

Prognosis.

It is always unfavourable. The acute phlegmasia may become chronic, if it be not promptly arrested, or the inflammation may extend to the contiguous viscera, and become mortal. When it advances with rapidity, there are delirium, convulsions, vomiting, extreme sensibility of the hypogastrium. If the urine accumulates in great quantity, and is not evacuated either by means of the catheter or by puncture, the bladder may burst, and this case is ordinarily fatal.

Dissection.—Thickening of the coats of the bladder, which sometimes considerably diminishes its capacity; perforation of this viscus, peritonitis, alterations of the neighbouring viscera, traces of irritation in the stomach, and even in the brain, if the disease has been attended with fever.

Treatment.

General and local bleeding by means of cups and leeches applied to the perinæum or hypogastric region. We must act boldly and without delay; for this phlegmasia advances rapidly, and may promptly occasion organic changes, which it will afterwards be difficult and often impossible to remedy. We resort, time after time, to topical depletion, if the inflammation does not yield. We must not hesitate to apply forty, fifty, sixty, seventy, or even a greater number of leeches at a time. In addition to this, baths, cataplasms, fomentations, and emollient drinks must be employed. Neither camphor, turpentine, nitre, opium, nor the acids are to be employed. The antiphlogistic treatment, rigorously employed, is the only curative means to be resorted to. The other pretended remedies are absurd, and not founded upon a consideration of the nature of the disease.

This treatment, and especially the application of leeches,

almost always succeeds in removing the retention of urine, by allaying the irritation of the bladder, or its neck, which gives rise to it. Where this effect cannot be obtained, we resort to the introduction of the catheter, and if this operation cannot be performed, we resort to the puncturing of the bladder.

CHRONIC PHLEGMASIA OF THE BLADDER.

CATARRHUS VESICÆ.

Symptoms.

When the mucous membrane of the bladder is alone affected, we discover it by the following signs:—pressure upon the pubic region, or upon the perinæum, excites no pain, and neither tumour, heat, nor pulsation is perceptible; the phenomena are only local; sometimes there is itching about the extremity of the gland, and in the fossa navicularis.

After the lapse of some time, if the irritation is not arrested, whitish mucosities, of a fetid and purulent character are observed floating upon the urine. The urine is sometimes lateritious, dark-coloured, or sanious. If the disease advances, the patient retains his urine for a shorter period, and the pain becomes more insupportable, indicating disorganization. There are in this case, sleeplessness, agitation, thirst, nervous irritation, cough, symptoms of gastritis, or peritonitis; sometimes the pains become lancinating, agonizing, and continued; hectic fever supervenes and closes the scene.

Causes.

The same as those of acute inflammation of the bladder, of which it is frequently the sequela.

Prognosis.

When the disease is of long standing, the cure is difficult. If it is recent, it is removed with sufficient facility. When there is profound organic alteration, there is no hope. If the disease depends upon a calculus, it may be cured by its extraction, if there be no complication of organic alteration.

Dissection demonstrates but too clearly the difficulty of curing catarrh of the bladder. We find the membranes thickened and fungous; we observe granulations, tubercles, and lardaceous tissues: we then become sensible that there are no specifics for these affections.

Treatment.

If the affection is recent, the antiphlogistic treatment must be employed; leeches should be repeatedly applied, sometimes to the perinæum, and sometimes to the hypogastric region, to the number of eight, ten, or twelve. Demulcent drinks should be used, such as barley water, and the decoctions of the mucilaginous plants, or mild diaphoretic draughts: vegetable food in moderate quantity, abstinence from wine, unless largely diluted with water, and still more from spirituous liquors, from coffee, tea, punch, &c.

Instead of small partial bleedings, it is sometimes useful to commence with the application of a great number of leeches at one time, for example, thirty, forty, or fifty. We should not despair of effecting a cure as long as the urine is not purulent. If the antiphlogistic treatment has been employed for a long time without success, we should have recourse to the injection of emollient fluids into the bladder; to revulsives externally; to issues; moxa; vesicatories without cantharides.

The medicinal soaps, the balsamic articles, such as copaiba, the essential oils, and uva ursi, sometimes afford

relief; but these are stimulants whose action it is impossible to ascertain beforehand; in no case should we employ them, unless they have been preceded by the antiphlogistic treatment. These medicines, which have been so lavishly praised, are beginning to lose much of their credit.

SEQUELÆ OF THE AFFECTIONS OF THE URINARY APPARATUS.

DIABETES.

An abundant secretion of urine, disproportionate to the quantity of drink. Diabetes has been divided into diabetes mellitus, and diabetes insipidus.

Symptoms.

The most prominent symptom is the remarkable increase of the secretion of urine, it would seem as though the whole body would melt away in these excessive discharges. The urine is, at first, insipid, or at least has only its natural taste; but as the disease advances it acquires a sweet taste, and assumes a greenish tint. Continual ardent thirst; sometimes a voracious appetite; parched mouth; the skin dry, and sometimes scaly; œdema of the feet and hands; acrid heat of the skin without perspiration; deep dejection; hectic fever, and death.

Causes.

In general but little known. Yet we may regard, as occasional causes of diabetes, all substances which have an irritating action upon the kidneys, whether directly or indirectly, such as diuretics, spirituous drinks, calculi, the action of cold. The muco-saccharine articles, which have been placed among the causes of diabetes, do not seem capable of producing this effect.

The proximate cause of diabetes, or rather the nature of the disease is ordinarily an irritation. This irritation is primitive in the kidney, or it is transmitted to it from the stomach, the ureters, or the bladder. The results of this irritation are infinitely varied; it gives rise at different times to the formation of small calculi, to softening, to scirrhus, to atrophy, to ulceration of the kidney, &c. With regard to the secretion of urine, irritation of the kidneys must necessarily produce a change in its quantity and quality. Sometimes, in fact, the secretion of urine is diminished, and even entirely suppressed under the influence of an inflammation of the kidneys; at other times, it is augmented, either temporarily, as in an attack of hysteria, or during a long time, as in diabetes. The quantity of urine is then the result of irritation of the kidney. We shall not, therefore, be surprised that the quality of urine is equally variable, for it is the nature of the secretory organs to elaborate different matter, when their action is modified by an inflammation. Thus the urine may be charged with blood, with mucus, with gravel, with a larger or smaller proportion of uric acid, or of the hydro-chlorate of soda, with saccharine matter, &c. owing to no other reason than the abnormal condition of the organ that secretes it. The urine may therefore be saccharine or otherwise, as happens in diabetes, on account of irritation of the kidney, without seeking for an explanation of the phenomenon in any other cause. Diabetes mellitus, however, indicates a more advanced stage of disorganization than diabetes insipidus.

Dissection proves, beyond the possibility of questioning it, the truth of the preceding theory. We find, in fact, in the kidneys, or in the bladder, or sometimes in the stomach, all the signs which indicate that these organs have been a prey to the ravages of inflammation. These

alterations are the same as those which we observe as the consequence of nephritis. (See Nephritis.)

Prognosis.

When diabetes is not arrested at its commencement, it is difficult to cure. When it supervenes on an old irritation of the kidneys, it is generally incurable, as there are generally in that case organic alterations. In general the danger is great in diabetes mellitus, which variety is not met with, unless the disease has continued for a long time. Tonics, astringents, the exclusive use of black meats, abstinence from aqueous drinks, have all in their turn been prescribed, but without success.

The antiphlogistic treatment has been used with no happier results. This is probably owing to its not having been employed sufficiently early, or to its not having been persevered in for a proper length of time; for no treatment would succeed, which is not commenced until organic changes have occurred.

At the commencement of this disease we do not hesitate to employ leeches, and to resort with confidence to a treatment similar to that of acute nephritis; and if there is a complication of irritation of the stomach, of the bladder, &c. we treat them by the means indicated in such cases.

The employment of urea has lately been highly extolled in this affection, but the trials have not been sufficiently numerous to determine its utility.

Many instances of cure have been cited, obtained by the exclusive use of a diet of fatty substances, and particularly of lard, persevered in until the diabetes is arrested, without the addition of any other article of food. The disgust and nausea which the long continuance of this treatment must occasion, should not discourage the pa-

tient; for it appears that hitherto no means have been equally successful, after the failure of the antiphlogistic treatment. It succeeds best in lymphatic and weak subjects; in those of a sanguine irritable temperament, the same success would probably not be obtained, but the trial might be made. Yet if there be irritation of the stomach, this treatment is not appropriate. Country air and amusement powerfully assist in the cure.

PHLEGMASIÆ OF THE GENITAL ORGANS.

IRRITATION AND INFLAMMATION OF THE UTERUS, METRITIS.

Symptoms.

In the acute state this phlegmasia is accompanied with horrid pain. The diagnosis is not difficult. Tumour above the pubis, sensible to the touch, and felt by introducing the finger into the vagina. Burning heat, pains, throbbing as in the phlegmonous affections. Sometimes the tumefaction and sensibility extend to the labia pudendi and the neighbouring parts; the passing of the urine is painful. As the womb has numerous sympathies embracing most of the organs, there are besides these local symptoms, sympathetic ones of a very prominent kind, the principal of which are the following: excessive pains in the groin and in the thighs, disorder of the stomach and of the brain, fever. This phlegmasia is rarely confined to the uterus, it involves the peritonæum, the lower belly becomes hard and resisting, and the whole abdomen soon participates in this condition, meteorism.

Causes.

Every thing that acts mediately or immediately upon the uterus: the abuse of venery, continence, pregnancy,

delivery, falls, surgical operations for the extirpation of polypus or fungus, or to destroy ulcers; the application of the forceps, the introduction of the hand into the womb, criminal attempts to produce abortion, the excessive use of irritating substances, whose action is chiefly directed to the uterus, such as rue, savin, saffron, &c. Irritation of the intestinal canal and peritonitis may produce this disease. This irritation may likewise be derived from the brain, but in that case the ovaria appear to be excited in the first place, as being more immediately under the influence of this organ, and from them the irritation extends to the uterus.

Prognosis.

If the phlegmasia is not seasonably arrested, it may, as we have already said, become complicated with peritonitis, and terminate fatally. The acute state generally terminates in ten or fourteen days in health, in death, or in the chronic state.

Treatment.

The antiphlogistic treatment should be promptly and boldly pursued. The treatment should commence with general venesection, and this should be followed up by the application of from forty to eighty leeches upon the hypogastric region, according to the gravity of the symptoms, and the age and constitution of the patient. Emollient drinks, the warm bath, fomentations upon the hypogastric region, mucilaginous injections. Injections per vaginam are painful and useless. We repeat the topical depletion if the inflammation does not yield on the first application. Any hesitation or delay, may, as in peritonitis, prove fatal.

SEQUELÆ OF THE PHLEGMASIÆ OF THE
UTERUS.

ACUTE CATARRH OF THE UTERUS.

Uterine catarrh, otherwise called *fluor albus*, or *leucorrhœa*, is characterised externally by a whitish lactiform discharge. It may be acute, and make an approach to metritis, described above, or it may be chronic: the latter, properly speaking, is the disease called *fluor albus*.

Symptoms.

Heat, pain, a sense of weight and fulness in the pelvic basin, the neck of the uterus is lower than usual, and is affected with acute lancinating pains, increased by the touch; the groins and thighs are likewise the seat of violent pain. Exudation of a tenacious, transparent, viscous, and acrid humour, which excoriates the labia pudendi, and occasions a swelling of them, as in metritis. Urine high-coloured and deficient in quantity, there is constipation, and the irritation often communicates itself to the rectum and bladder.

Fits of coughing, sneezing, and vomiting, which shake the trunk, augment the pain. The sympathetic phenomena are numerous. Thus there is generally fever, which is rather slight, commencing with disorder of the stomach, malaise, alteration of the complexion, a bluish circle around the eyes, a tongue whitish in the middle and red upon the borders.

Treatment.

It should be entirely antiphlogistic, as in metritis. We should recommend the assiduous employment of baths, emollient fomentations, lavements, emollient applications

to the sexual organs, mild, vegetable, easily digested diet, abstinence from spirituous liquors, from tea, coffee, from coitus, and from every thing that might have a tendency to excite lascivious ideas.

When the treatment is well directed, the symptoms gradually diminish, and the disease generally terminates in twenty or thirty days.

CHRONIC UTERINE CATARRH, FLUOR ALBUS, LEUCORRHEA.

Symptoms.

Uterine catarrh much more frequently presents itself under the chronic form, even from the commencement, than under the acute; sometimes, however, it succeeds the acute state.

If it has been preceded by the acute state, it retains a certain degree of heat, and of the acrid character. There is generally a sense of pain and lassitude in the legs and thighs.

When it has not been preceded by the acute state, which is more generally the case, it is seldom that the flow is accompanied with pains of the uterus or vagina. There is generally a sense of weariness, of weakness, and of sinking of the stomach. The eyes are surrounded by a dark circle, the tongue is whitish, and the appetite languid. Sometimes the discharge occurs two or three days before the catamenia, and terminates three or four days after them. At other times, on the contrary, it ceases on the appearance of the menstrual discharge, and reappears some days later; but in the course of time the discharge becomes habitual. Some women experience but little derangement of their digestive functions, others are not troubled with the disease but when they live in a heavy damp atmosphere. In general, chronic uterine catarrh has some relation to the skin; when the action of the latter is di-

minished, as occurs in cold and humid climates, that of the mucous membrane of the womb is increased, and *vice versa*.

Persons of a lymphatic constitution, who have not indulged to excess in venery, and who have not had children, usually have fluor albus during the whole time that the menses continue, without suffering any inconvenience from it.

Causes.

The causes are generally the same as those of the acute variety. To these we may add the lymphatic temperament; residence in large towns; the use of coffee with milk, as the experience of every day proves; a luxurious and indolent life.

Nature of the Disease.

Authors generally regard fluor albus as a sign of weakness: this is an error, for it often makes its appearance with the menses, a period at which the uterus enjoys its greatest activity, and also ceases with their termination, when the action of the uterus is diminished. When the catarrh continues, it is because the irritation of the uterus continues. Another proof is derived from the fact, that when uterine catarrh continues for a long time, it is not uncommon to see a chronic inflammation of the womb developed, with organic alteration, scirrhus, cancer, &c. Now, debility is not productive of such effects.

Treatment.

It varies with the primitive seat of the irritation, its intensity, and the constitution of the patient.

If the catarrh is connected with disorder of the digestive function, we must examine whether this derangement arises from irritation of the digestive organs, which will

be indicated by redness of the edges of the tongue, and by the sensibility of the epigastrium; or whether there be real debility, a state which occurs in women who have been weakened by the prolonged and exclusive use of aqueous and mucilaginous substances. We recognise this state by the existence of cramps of the stomach, without redness of the tongue, or tenderness on pressure. In the former case the antiphlogistic treatment should be employed, and even leeches applied to the epigastrium, if the irritation is by any means considerable. In the second case we prescribe more strengthening diet, light, bitter, and astringent infusions, slightly narcotic and astringent injections per vaginam. In every case, abstinence from coitus must be adhered to; this is an essential condition of the cure. When there is heat, pain, and sensibility in the uterus, and swelling of the neck of the organ, we must employ emollient injections, such as decoctions of mallows, of flaxseed, &c. Diluent drinks, a mild and vegetable diet, baths, emollient lavements, repose. Abstinence from wine, from spirituous liquors, from coffee and tea.

If there is a want of action in the skin, and as a consequence increased activity of the mucous membrane of the uterus and vagina, we prescribe friction with a flannel impregnated with the vapour of aromatic plants, the use of woollen over the whole body; warm clothing; exercise; residence in the country in a dry climate; wholesome and abundant nourishment. However, if there are symptoms of gastric or of gastro-enteritic irritation, we treat them by appropriate measures, at the same time that we endeavour to restore the action of the skin by the external applications which we have just described.

In persons of a lively and irritable temperament, if the discharge is not accompanied with uterine pains, we first employ emollient injections of a decoction of mallows and

poppy, afterwards an infusion of the red rose and poppy, and finally, injections of astringent and tonic articles, principally of rhatany, pomegranate, catechu, tormentil, bistort. When there is no sensibility of the parts, a little aromatic wine, or a few drops of laudanum, may be added. In a word, when there is no sensible irritation, and the organs are flaccid, the use of tonics and astringents is indicated, and we should commence with the mildest articles of these classes: when there is sensible irritation, emollients are necessary.

A cure is sometimes obtained after having tried all other means without effect, by establishing a point of revulsion in the sacro-lumbar region by means of a large blister, which should not contain cantharides on account of the vicinity of the urinary organs.

SEQUELÆ OF THE CHRONIC PHLEGMASIÆ OF THE UTERUS, ORGANIC ALTERATIONS, SCIRRHUS AND CANCER OF THE NECK OF THE WOMB.

Prolonged irritation of the neck of the womb ultimately brings on disorganization; induration or scirrhus first occurs, and afterwards cancer.

Symptoms.

First degree.—Sensation of fulness in the pelvis, and of a weight which appears as though about to fall. Heat, pain in the groins and thighs, in the vagina, and about the neck of the bladder, cramps of the stomach, pale complexion. On touching, the neck is found painful, swelled, hard, and hot. Until ulceration occurs, it is uncommon for fever to exist.

Second degree.—If this disease is not arrested, the neck of the uterus advances with more or less rapidity towards disorganization. Digestion is attended with pain,

there is fever, a disgust for food, sometimes nausea and vomiting, frequency of pulse and exacerbation of fever towards evening, debility, lassitude, emaciation, pale, or rather pale sallow complexion. The pain is in proportion to the sensibility of individuals. Women whose sensibility is obtuse, suffer little; they experience a sense of weight, and have a puriform, yellowish, or greenish discharge. Women of little sensibility may conceive, notwithstanding the presence of scirrhus. This is not the case with persons endowed with greater irritability. There are some whose sensibility is so acute that chronic inflammation of the neck of the uterus produces death before disorganization, the pain of which they are incapable of enduring, has occurred.

The stomach and liver almost always contract irritation from the uterine affection: sometimes the lungs likewise participate, but more rarely.

Constipation always accompanies this affection.

Fever always indicates the existence of phlegmasia of the digestive organs, for it would not arise if the cancer existed alone and without complication.

Cancer of the neck of the uterus often gives rise to copious uterine hæmorrhages; in some it occasions purulent discharges intolerably fetid; or it may produce both these effects in the same person. Sometimes the cancer terminates in dropsy. Before death occurs, there is generally a deterioration of most of the functions; this is in consequence of the irritation having invaded most of the organs, and not on account of the cancer having communicated vicious qualities to the blood, as is taught by authors who give to this general state of deterioration the name of cancerous cachexy.

Causes.

All those of the phlegmasiæ of the uterus, the continued

action of these causes, and principally a preceding phlegmasia, and the stimulating and incendiary means resorted to against these irritations. We must also recognise an organic predisposition to contract irritation.

The proximate cause, or the nature of scirrhus, is easily conceived. The irritation, continued for a long time, causes an afflux of fluids to the irritated part: there is, in consequence of this, super-nutrition, a deposit of albumen and other matters, a formation of foreign tissues in the midst of the parenchyma, which must necessarily become indurated; thus scirrhus is produced: the inflammation continues, or even passes to the acute state, and occasions ulceration of the engorged, swelled, indurated, or scirrhus parts, and this constitutes cancer.

Prognosis.

If the engorgement is red, soft, sensible, without alteration, there are hopes of cure; but if it is hard, insensible, yellowish or brownish, with a discharge of purulent matters, the prognosis is unfavourable.

When ulceration exists in an engorgement of the first species, there is more hope than when it supervenes on an engorgement of the last kind.

If the discharge is small, white, or of pure blood, not acrid, the prognosis is more favourable; it is ominous if the discharge is mucous, sanious, very fetid, acrid, purulent, abundant, corrosive. If at the same time the touch discovers an ulceration upon an indurated neck, there is but little hope. The yellow tint of the complexion is an unfavourable symptom, because it does not supervene except when disorganization is far advanced.

Treatment.

Variable, according to the progress and intensity of the disease. In women of robust and sanguine constitutions,

whose digestive functions are not yet impaired, and whose complexion is not sallow, we must employ the antiphlogistic treatment boldly and with perseverance; leeches to the number of twenty or thirty above the pubis, to the labia pudendi, to the perinæum. If we obtain a slight amelioration after one or two applications, we repeat them with confidence every third or fourth day; but in smaller numbers, for example, ten or twelve, through the fear of prostrating the patient. We second the topical depletion by the continual employment of emollient cataplasms and fomentations. Ice applied to the sexual organs may also be advantageous. Severe regimen consisting in light and poor slops and some cooked fruits. Absolute rest. Leaping, dancing, running, and all violent exercise are obstacles to the cure. For the same reason entire abstinence from venery must be enjoined. We discard as poison the anti-cancerous medicines so called, such as cicuta, the narcissus of the meadows, &c.

If there is considerable induration of the neck, frequent bleeding would produce no effect, and would even be dangerous. The diet in this case must be less severe; we confine ourselves to the employment of cataplasms, of emollient injections, and local baths; leeches may be applied when the pains are more acute.

Revulsives may be useful in some cases. If the patient be of a lymphatic constitution, we may act upon the digestive canal by purgatives if it is in a healthy state. The sulphates of soda and magnesia, or the phosphate of soda in the dose of an ounce or an ounce and an half dissolved in a pint of water, constitute the most convenient purgatives. One, two, or three glasses of this solution should be taken every day for several weeks in such a manner as constantly to keep up an easy evacuation of the bowels. We desist if symptoms of gastritis supervene; in this case the patient must be confined to emollients and to

the white and vegetable regimen. Emollient and narcotic injections made with the root of mallows, with the poppy, or with the *solanum nigrum*. If there are fixed and obstinate pains in certain points of the abdomen, we employ emollient applications, and armed or dry cups according to the strength of the patient, or leeches. In women of an irritable constitution, we combat constipation by emollient lavements, the use of watery fruits and fresh vegetables, but never by purgatives. If hæmorrhage occur from time to time, a farinaceous diet must be enjoined, and for drink, water acidulated with sulphuric acid, very light decoctions of rhatany, emollient and opiate injections, cold externally applied, if we have no apprehension with regard to the thoracic organs.

Finally, when all hope is lost, nothing remains but to palliate the pain; we employ opium in every way, combined with mucilaginous drinks, in frictions, in cataplasms, in lavements, and in baths. The discharge, which excoriates the parts, must be wiped away, and a sponge should remain in the vagina to absorb it. From time to time, we cautiously employ opiate injections of melilot, of poppy, of mallows, of milk, &c.

For some time past, the excision of the scirrhus or cancerous neck of the uterus has been practised with various success. We must wait for more numerous experiments to judge of the utility of this bold operation, which cannot be attended with success, except when the disease is confined to the neck; extirpation of the whole uterus being a rash operation, although it has several times been attempted.

PHLEGMASIÆ OF THE BODY OF THE UTERUS AND OVARIA,
WITH ORGANIC ALTERATIONS OF THESE PARTS.

The body of the uterus and its appendages are subject to many kinds of organic alterations. These alterations,

whatever may be their form, have always for their proximate cause an irritation or an inflammation of the parts which are their seat, or in other words, these alterations are constantly the result of an acute or chronic inflammatory process, preceding and accompanying them, which is sometimes almost imperceptible.

The affection of the ovaria is more common than that of the body of the uterus.

It is not always easy to determine precisely the seat of the disease, but this is of little importance in practice, the essential thing is to know the degree of inflammation.

Symptoms.

To the touch the neck of the uterus is sound, but on applying the hand to the hypogastric region, a tumour, varying in size is perceived, which sometimes acquires such a magnitude as to produce the appearance of pregnancy. We may then conjecture that the body of the uterus is the seat of the disease. If the tumour is felt on one side of the uterus, it is probable that one of the ovaries is affected.

These tumours often increase at each menstrual period; they have been observed to descend even to the thighs, but these are extraordinary cases. They consist in an excessive and unnatural development of the ovaria, or they form what is called a cyst of the ovarium. These encysted tumours are more embarrassing than painful to the patient.

We may generally recognise the presence of a cyst by the fluctuation. But dissection alone can reveal the precise nature of the alteration. The cysts are sometimes found filled with an albuminous matter; sometimes their contents are solid, resembling suet or yellowish grease, and we occasionally observe both these alterations existing

together; in these cases the fluctuation is more obscure than when the contents of the cysts are liquid.

It is not uncommon for the diseased parts to form adhesions with the healthy.

Prognosis.

These alterations are of an alarming nature if the disease is of long standing, but we may hope to discuss tumours of the uterus and ovaria when the malady is recent.

In the case of cysts of the ovaria, of fibrous tumours of the uterus, of the development of fatty and lardaceous tissues, or of consecutive dropsy, there is no hope of cure.

Treatment.

By the treatment of the acute state we may prevent the supervention of the chronic. This treatment must be rigorously antiphlogistic. The application of leeches to the tumour, or the painful spot, frequently repeated; emollient cataplasms; douching the parts every four or five days, and following this operation with the application of eight or ten leeches; frequent baths, the internal use of the thermal waters, if the intestinal tube is sound. If there be a cyst, and very evident fluctuation, puncturing may be tried.

When there is dropsy,^s dyspnœa, swelling of the legs, and a tumour of great magnitude, we can no longer employ any other than a palliative treatment. It is then at the beginning that we must use strenuous endeavours to dissipate the irritation; for if we temporize, every kind of treatment usually becomes inefficient. In case an abscess is formed, its treatment is the same as that of other abscesses.

When the tumour is considerable, we support it with an appropriate bandage.

The pretended deobstruents only augment the irritation; they should be rejected.

A revulsive medication is not unworthy of our attention. This consists of light purgatives, if the intestinal tube is healthy, dry or aromatic frictions, the frequent application of cups in the neighbourhood of the tumour, douching.

The success which I have obtained from the employment of galvanic electricity in certain cases of engorgement of the thyroid gland, and of the mammary and lymphatic glands, favour the presumption of the efficacy of this means in engorgement of the ovaria and the womb, and particularly in the commencement of these affections.

To direct a galvanic current upon the body of the uterus in this manner, make one of the poles communicate with the neck of the uterus through a tube of glass, of the form of a speculum uteri, to insulate the conductor, and make the other pole communicate with the tumour. In the case of diseased ovaria, the two poles are to be placed in opposition on the points of the tumour most remote from each other. The voltaic pile may be used every day, or even twice a day, for the space of twenty, thirty, or forty minutes, or even an hour.

IRRITATIONS AND INFLAMMATIONS OF THE GENITAL APPARATUS OF MAN.

INFLAMMATION OF THE URETHRA.

In the greater number of cases this disease is of venereal origin.

It is generally characterized by pain of different degrees of intensity, during the passage of the urine, and by a discharge of a whitish matter: it is then named blennorrhagy. This discharge is the result of an excess of action existing in the mucous membrane of the canal. It bears the same relation to this canal that nasal catarrh or coryza does to the mucous membrane of the nose.

Whether there exists a discharge or not, the duty of the physician is to give his whole attention to the inflammation or irritation itself. Whether the irritation of the canal of the urethra, with or without blennorrhagy, is derived from a syphilitic source, or has a different origin, the nature of the irritation is always the same, and exacts the same treatment. It is either acute or chronic. When acute, it is often accompanied by pain of no little intensity. When chronic, it is seldom or never painful; and it only manifests itself by a mucous, lactiform discharge, which seldom assumes a purulent appearance. As a sequel, the mucous membrane sometimes becomes thickened, giving rise to contractions of the canal.

*Treatment of Acute Inflammation of the Urethra—
Acute Blennorrhagy.*

To prevent the communication of inflammation to the bladder, to the testicles, or to the inguinal glands, we must commence the treatment by the application of twenty or thirty leeches to the perinæum and to the root of the penis, and likewise apply three or four over the course of the urethra; the bites are to be covered by an emollient cataplasm. We must second this first medication by a treatment rigorously antiphlogistic, by emollient drinks slightly medicated with nitre, frequent warm bathing, lavements, vegetable diet, and rest: for it is certain that walking, riding, and dancing, keep up the inflammation and retard the cure. If the pain is insupportable, the part may be bathed two or three times a day in a decoction of mallows or of poppies. Neither wine, alcoholic drinks, coffee, nor tea, are to be allowed; total abstinence from venery is to be enjoined. What shall we say of balsam copaiba, of cubebs, of drastic purgatives, &c. It is true these medicines sometimes remove blennorrhagy in a very short time, often in the course of six or eight days.

Yet none but charlatans can recommend the use of them. The physiological physician, who is aware that they only act as revulsives, and by actively irritating the digestive canal, and inviting thither the urethral irritation, will resort to them with the greatest reserve, and only in cases in which there is a total absence of irritation in the intestinal canal. In every case, we risk the exchange of an irritation of little importance, which always yields to the treatment pointed out, if pursued with care and perseverance, for a gastritis, an enteritis, or a colitis. The specifics of empiricism so much vaunted, and which find dupes to use them still more numerous than knaves to sell them, owe their properties to some one of the irritating substances of which we have been speaking, or to others analogous to them.

*Treatment of Chronic Inflammation of the Urethra—
Chronic Blennorrhagy.*

The treatment of this disease varies according as the preceding blennorrhagy has been treated by antiphlogistics, or has been kept up and exasperated by stimulants, balsam copaiba, cubeb, purgatives, &c. In the first case, when the prolonged use of antiphlogistics has failed, we must continue the treatment, and in addition, make use of injections; not, however, beginning abruptly with the most astringent, as is often done, but by gradually ascertaining the sensibility of the canal. We commence then the first day by injecting cold water; the next day we employ a solution of sugar in water; we then resort to a solution of sugar in wine and water, and afterwards in pure wine. At a more advanced stage of the treatment we employ the decoction of rhatany, which we render more strong as we advance: two drachms of the extract of rhatany to a pound of water constitute a very good proportion. Finally, we come to injections of the sulphate of

zinc, the sulphate of alumine, the acetate of lead. But it is rarely the case that blennorrhagy does not yield to the employment of injections made with substances containing tannin. The discharge having been arrested, we continue the injections, following an order the inverse of that with which we commenced, descending by degrees to the less astringent, until we return to pure water. We repeat the injections five or six times during the day. In the second case, that is, when the blennorrhagy has been exasperated by stimulants, we commence by employing the same treatment as for the acute stage. This treatment often succeeds; if it do not, and we can obtain the consent of the patient, we should apply a blister to the perinæum, or high up on the thighs, to operate a revulsion, at the same time continuing the antiphlogistic treatment. If this mode is unsuccessful, injections should be employed as in the preceding case. In every case in which injections are used in the manner pointed out, their administration should be suspended the instant that symptoms of the acute stage supervene, and we perceive that they augment instead of diminishing the irritation.

Violent exercise, dancing, spirituous drinks, tea, coffee, heating aliment, and venery are to be interdicted as rigorously as in the acute stage.

INFLAMMATION OF THE TESTICLE; VENEREAL TESTICLE.

Organic Alterations which result from it.

The testicle receives irritation through a diversity of channels. The most ordinary causes are irritations of the canal of the urethra, which often involve the testicle. It is incorrectly said in these cases that the blennorrhagy has fallen upon the testicles; the irritation having become predominant in the testicles, it appears to have abandoned, and often in reality abandons the canal of the urethra. It

is then a metastasis, and nothing more. The name of venereal testicle, which has been given to it in this case, signifies nothing, this inflammation being of the same nature as that arising under any other circumstances. The other causes of this affection are falls, contusions, pressure produced by the clothes, equitation, activity of the seminal secretion, when there is no evacuation of it, or emissions of semen too frequently provoked and disproportionate to its secretion. Inflammation of the testicle is acute or chronic.

Symptoms of Acute Inflammation.

Under the influence of the preceding causes, the testicle becomes hot, painful, and swelled, and acquires, sometimes in a very short time, a considerable development. If we do not promptly attack the disease, it ordinarily becomes chronic, and it is important to prevent this result.

Symptoms of Chronic Inflammation.

The tumour may remain for a certain time stationary, and often there is only a simple engorgement, unattended by any organic alteration, or any considerable pain. Yet if we do not arrest the irritation, the tunica vaginalis becomes thickened, and the exterior cellular tissue hardened; the testicle continues to grow large and indurated, particularly towards the epididymis: this constitutes sarcocele. At other times, the secretion of an albuminous serosity, more or less abundant, takes place, the result of inflammation of the tunica vaginalis; this is hydrocele. Sarcocele and hydrocele sometimes exist simultaneously. Cancer, scirrhus, suppuration, ulceration, &c. are likewise results of the chronic inflammation of the testicles.

Treatment of Acute Inflammation.

Irritation of the testicle being identical in its nature, whether its origin be venereal or not, the treatment does not vary. When the testicle becomes hot, swelled, and painful, it is necessary to attack the disease. The treatment will consist of rest; the horizontal position; confinement to bed, as far as possible; the use of the suspensory truss; an emollient cataplasm to the diseased part; frequent warm baths; the application of leeches to the testicles, varying in number from ten to forty, according to the sensibility and strength of the individual. By these means we remove in a short time the acute inflammation of the testicle, which, in every case may assume a very serious aspect. We persevere for some time in the use of emollients, even when the inflammation has been subdued. In this manner we prevent hydrocele, sarcocoele, and other organic alterations. Ice has sometimes been used with success, but very irritable persons cannot endure the application.

Treatment of Chronic Inflammation.

When the malady is decidedly chronic, a state that is often derived from the ill-timed use of discutient applications, such as the acetate of lead, vinegar, the plaster of vigo, &c.; if organic alteration has not yet occurred, we can have recourse to the antiphlogistic treatment indicated above; numerous cures daily demonstrate its advantage; but the patient should be informed that the cure is slow, and that a persevering use of the means is necessary. Douches to the parts, followed by the application of eight or ten leeches, once, twice, or three times a week, have sometimes succeeded when all other means have failed.

After the prolonged use of antiphlogistics, when the irritation has been subdued, we may hasten the resolution of the tumour by the employment of discutient ap-

plications, whatever may be the cause of the disease. Frictions upon the scrotum with a little mercurial ointment, or with calomel moistened with saliva, the application of compresses wet with vinegar and water, or with a weak solution of the acetate of lead, or of the deutochloride of mercury. We must essay successively these various means, and not persevere in their use unless when we derive from them, in a reasonable length of time, some decided advantage. Mercurial frictions may likewise be employed on the internal face of the thighs. Abstinence from stimulating food and drinks, from venery, rest, the use of the suspensory bandage, the warm bath. This treatment is to be continued several days after the cure seems confirmed.

When the treatment has not been successful, and the testicle is hard, affected with lancinating pain, or is scirrhous or cancerous, we practice extirpation, but we are not driven to this extremity, until we have exhausted the antiphlogistic treatment. In the case of hydrocele, we practice the puncture.

Sudorifics may be used, such as the sarsaparilla and others, and gentle purgatives may be employed with prudence, after the antiphlogistic treatment, if the digestive canal is sound.

ABDOMINAL PHLEGMON.

This is an inflammation of the cellular tissue which exists between the muscles and the peritonæum, and between the duplicatures of the great epiploon, in the gastro-hepatic epiploon, in the mesentery, around the colon, on the flanks, around the kidneys, in the iliac fossa; all these points may be the seats of an inflammation.

Symptoms.

The general signs of phlegmon: the pulse large, full,

frequent, and not contracted, as in the inflammations of the intestinal mucous and serous membranes. If the disease advances, there is fever resembling the inflammatory fever.

The existence of phlegmonous inflammation having been ascertained, where is it situated? If the phlegmon exists about the liver or the right side, the part will be hot and renitent, but the absence of the symptoms of hepatitis or gastritis will distinguish it from those affections. In the pelvic basin, it interferes with the functions of the viscera in its vicinity. When the epigastric region is the seat of it, there is redness of the tongue, an impossibility of swallowing, but there is appetite and an absence of the sympathies that indicate gastritis.

When in the epiploon, we sometimes perceive a painful swelling in the parietes of the abdomen; but the pulse is not small and contracted, as in peritonitis. It is difficult, not to say impossible, to distinguish phlegmon of the mesentery from enteritis.

Causes.

Falls, blows, inflammation of the contiguous viscera, and of the fibrous locomotive system communicated to the cellular tissue, the repercussion of the psoric affections, irritants applied to the skin, a particular individual predisposition.

Prognosis.

It is of importance to arrest promptly this phlegmasia, which is not less dangerous than acute peritonitis or gastritis. It may produce suppuration in a short time; the pus diffuses itself, is absorbed, and the patient falls into a state of putridity and colliquation. On an examination of the body after death, we meet with vast abscesses, and other important organic disorders. If the phlegmon passes

into the chronic state, the abdominal viscera suffer from compression, and there is generally a complication of gastro-enteritis and pneumonia; marasmus supervenes, and death releases the patient from his sufferings.

Treatment.

In the acute stage, general bleeding, assisted by the application of a large number of leeches over the affected parts, as in peritonitis. (See Peritonitis.) To cover the bites with large emollient cataplasms, rest, confinement to bed, a diet more or less rigid, according to the intensity of the inflammation; to continue the use of those means for some time, even after the malady has begun to assume a chronic form.

If the antiphlogistic treatment proves ineffectual, and the disease remains stationary, we must employ revulsives: dry frictions; mercurial frictions; vesicatories; the moxa, placed at a little distance from the diseased point; sudorific drinks, if the digestive organs are in a sound state; warm baths; douches; mineral waters of an aperient nature. All internal stimulants are to be abandoned the moment symptoms of gastritis, or of gastro-enteritis make their appearance.

INFLAMMATORY IRRITATIONS

OF THE MUCOUS MEMBRANE OF THE PECTORAL VISCERA AND THEIR CONNEXIONS:—OF THE NOSE, THE EAR, THE EYE, THE MOUTH, THE VELUM OF THE PALATE, THE TONSILS, THE PHARYNX, &c.

After the irritations of the abdominal viscera, it is proper to treat of those of the viscera of the chest, on account of the close connexion between them.

External irritations often give rise to those of the chest, as we have seen with regard to the intestinal tube.

It is proper to commence the history of the phlegmasiæ of the chest with those of the mucous membrane of the nose, the ear, the mouth, the larynx, because the irritation of the lungs often commences in them, on account of the continuity of the mucous membrane.

The general causes of irritation of the mucous membrane of the pectoral viscera, are:—

1. Cold: it suppresses the action of the skin, which reproduces itself on the membranes in question.

2. The sudden suppression of the cutaneous transpiration, or of an issue.

3. The action of air more or less heated, more or less charged with gas or irritating vapours.

4. Modifications produced by natural stimulants. The phlegmasiæ of the intestinal mucous membrane repeats itself on that of these viscera.

5. A particular organic disposition, rendering these organs more apt to take on irritation.

IRRITATIONS OF THE NASAL MUCOUS MEMBRANE.

CORYZA.

Irritation of the mucous membrane lining the nasal passages is denominated coryza. It may present itself in various degrees. It corresponds in intensity with the causes that produce it, and the inflammatory predisposition of the subject.

Symptoms.

A sensation of weight in the frontal region, watering of the eyes, there is pain above and below the orbits, respiration by the nose is difficult or impossible; there is a discharge of an acrid mucosity from the nostrils, which

irritates the skin and the lips; the sense of smell is totally suppressed, or nearly so; sneezing, or the desire to sneeze.

This irritation may be communicated to the mucous membrane of the lungs, and give rise to pulmonary catarrh. It is sometimes known to assail the maxillary sinus, and determine there a collection of mucous or purulent secretions.

Coryza may become chronic, especially if the cause is permanent.

Causes.

The most frequent are vicissitudes of heat and cold; cold to the feet; the sudden suppression of the cutaneous transpiration; gases and irritating vapours; falls; external violence; the introduction of irritating bodies into the nasal passages.

Prognosis.

Coryza alone, owing its origin to an external cause, is an affection of little importance; but, if it is connected with a pulmonary or cerebral affection, the danger will be in consequence of the intensity of this latter affection.

Treatment.

The most important part of the treatment consists in the avoidance of cold, particularly that of the feet. The use of demulcent drinks is sufficient to dissipate this irritation in the greatest number of cases.

In case of a very violent coryza, one or two leeches may be applied to the orifices of the nose, particularly if a pulmonary catarrh be apprehended.

If there is danger of a cerebral congestion, besides the leeches, we practice a general bleeding. In one word, the complication and extent of the irritation must determine the treatment in this as in all other cases.

PHLEGMASIA OF THE ORGANS OF HEARING.

OTITIS.

The mucous membrane which lines the interior of the ear, is subject to inflammation. This inflammation is called otitis. It is acute or chronic.

Symptoms.

They bear a relation to the intensity of the inflammation; if this is very intense, the least noise is insupportable, and the least agitation of the air reverberates through the whole head. An exaltation of the sense of hearing, pulsatile pain, sometimes so intense that it banishes sleep, and renders the patient almost furious. There are heat and swelling around the external ear; the pain sometimes extends to the posterior parts of the mouth, through the Eustachian tube. This inflammation never gives rise to fever, unless it be complicated with other phlegmasiæ. If the external auditory meatus is inflamed, there is exalted sensibility of the part and a buzzing in the ear, but the pain is not equally intense; there is a little deafness and a discharge of mucosities.

Causes.

The natural stimulus of the ear is sound, when too loud it may occasion inflammation.

Cold may determine it in two manners, by the external auditory canal, and by the Eustachian tube, which likewise may become irritated from the extension to it of the irritation of the mucous membrane of the nose, of the mouth, or of the pharynx, &c.

Then follow in the list of causes, external violence, the suppression of the cutaneous transpiration, of the itch, of

the tetter, of rheumatism, of an issue, of the gout, of a hæmorrhage, &c. It may be produced by an inflammation of the brain, and *vice versâ*.

Prognosis.

It may be promptly cured, if the treatment be commenced in proper time; but if the malady has become chronic, if there is suppuration, it is to be presumed that the disease will be tedious. When there is a discharge of pus with carious bones, the disease is profound, and we may apprehend the loss of hearing, and in the sequel, organic alterations. However, we cannot establish a very decided prognosis, for there are sometimes persons who live a very long time with an otitis; in others, a fatal termination soon occurs, in consequence of inflammation of the brain. If the inflammation is very violent, there is always some danger.

Treatment.

In the acute stage, the application of twenty to fifty leeches around the ear; a repetition of this means if the inflammation continues; warm emollient injections; by this treatment the disease is subdued in three or four days. If the inflammation is slight, and is confined to the external auditory meatus, repeated emollient injections will be sufficient. Rest and the absence of noise.

If the disease is of some continuance, we must employ revulsives; a blister to the neck; pediluvia with water rendered stimulant with mustard. If the inflammation resume the acute state, we resort to local bleeding, as in the preceding case.

If deafness be the result of the suppression of a hæmorrhagy, of the tetter, or of the itch, &c. the irritation must be recalled to its first seat by appropriate stimulants. Leeches often cure deafness depending upon these causes.

If there be a complication of encephalitis, of gastritis, &c. we combat these affections by the means usually resorted to in those diseases.

PHLEGMASIE OF THE ORGANS OF SIGHT.

OPHTHALMITIS.

Irritation of the mucous membrane of the eyes is closely allied to that of the mucous membrane of the mouth and nose, on account of the relation that exists between these tissues. This irritation is called ophthalmia. Ophthalmia has its seat in the conjunctiva, in the margin of the eyelids, or it affects the globe of the eye. It is chronic or acute.

Symptoms.

Redness of the conjunctiva; the sensation of a grain of sand or any other irritating body on this membrane; pain varying in intensity; a watering of the eyes; difficulty or incapacity of bearing the light. If the inflammation occupies the margins of the eyelids, to the preceding symptoms are joined redness and swelling of the tarsi cartilages; sometimes there is a secretion of whitish or yellowish matter, which glues the eyelids together, and prevents the patient from opening his eyes, especially on awaking in the morning.

If the inflammation becomes phlegmonous, it occupies the whole globe of the eye, and the swelling is more considerable than in simple ophthalmia of the conjunctiva. The view is completely obscured; the pain is most intense; fever often makes its appearance, varying in intensity with the inflammation and the irritability of the patient.

Most frequently both eyes are affected; however, the inflammation sometimes attacks but one eye, and after it

has continued to occupy it for some time, the other is often affected by sympathy; or the inflammation ceases in the one to transfer itself to the other.

The course of this phlegmasia depends on the causes which have produced it, or which keep it up, and upon the constitution of the individual.

It may extend to the brain and give rise to encephalitis. It may thicken the cornea, and render opaque the humours of the eye; for, if the irritation is communicated to the organs charged with the secretion of these humours, the nature of the secretions must necessarily be changed.

Sometimes the crystalline lens alone becomes opaque, constituting cataract. Every kind of organic inflammation may be the result of this inflammation: spots of the cornea, scirrhous, cancer, staphyloma, glaucoma, hydrophthalmia, &c.

If the cause is venereal, organic disease much more readily occurs.

It is often the case that the nasal duct participates in the inflammation, the mucous membrane becomes thickened, and there results fistula lachrymalis, epiphora.

Causes.

Too intense a light; long-continued reading at night or in the sun; external violence; foreign substances introduced into the eye; acrid vapours; irritation of the mucous membrane of the nose extending itself to the eye; inflammation of the brain, that of the gastric passages, and, by consequence, the causes of those affections; depressing passions; grief; prolonged weeping; the metastasis of an irritation to the eyes. In this last cause is comprised the suppression of a cutaneous eruption, of an hæmorrhage, of an issue. The measles, the small-pox, and very frequently the scrofulous affection, the venereal pus.

Treatment.

If the inflammation is acute, the application of twenty, thirty, or forty leeches about the temples. It is very dangerous to apply them, as some physicians advise, to the conjunctiva, as the bites may determine a violent inflammation, the consequences of which are always unhappy. Cold emollient fomentations of the decoction of mallows or of flaxseed. No cataplasms. If the irritation be not very intense, the application of cold to the eye, continued during several successive hours. The exclusion of light; pediluvia with water containing mustard; demulcent drinks; glysters to keep the bowels open, or mild laxatives if the digestive organs are sound; diet more or less severe, according as there is fever, or the local inflammation be more or less intense. If there exists plethora, and particularly if the inflammation be phlegmonous, at first a general bleeding, afterwards local bleeding, often repeated to prevent organic alterations. This precept is to be rigorously enforced in every case, but more especially when the ophthalmia has a venereal origin.

In the chronic stage, after the inflammation has even existed for some months, we may use moderate topical depletion, and repeat it from time to time, adding to it the treatment pointed out below.

After the employment of antiphlogistics, if the irritation continues, and remains stationary, we make trial of the astringent collyria, which are most suitable when the vessels become varicose and there is but little pain.

We employ for this purpose solutions of the sulphate of zinc or the sub-acetate of lead, containing a small quantity of opium, the clarified decoctions of the substances containing tannin, such as galls, bistort, tormentil, &c. An ointment may also be employed made with the sulphate of alumine, or the white of an egg and alcohol beaten up

together. We suspend the employment of astringents if they increase the irritation. In chronic palpebral ophthalmia, we often obtain very good effects from frequent fomentations with water made as hot as the eyelids can bear it. We also attack these rebellious palpebral irritations with astringents, and even with cauterization with the nitrate of silver or the butter of antimony.

When ophthalmia has left a certain opacity of the eye, we sometimes succeed in dissipating it by antiphlogistics and cold emollient fomentations; if this does not succeed, we blow into the eye the oxide of zinc, sugar candy, and the proto-chloride of mercury, reduced to an impalpable powder. To conclude, we must feel our way, employ now one remedy, and then another, be governed by the susceptibility of the diseased parts, and suspend our treatment if the irritation appears to be exasperated. Revulsion is one of the most powerful means of treatment in chronic ophthalmia; we can pursue it in connexion with the antiphlogistic treatment. When every thing has failed, it often yields to a large blister, and particularly to a seton in the neck, a remedy that we cannot too strongly recommend.

The syphilitic complication should be treated by means appropriate to the nature of the disease.

The scrofulous disposition should be combated by the means pointed out, (see Scrofula;) but ophthalmia derived from this cause does not require a peculiar treatment. Antiphlogistics and topical bleeding in the acute stage are to be resorted to; in the chronic, antiphlogistics and revulsives, particularly the seton; these means with astringents, constitute the whole treatment.

Complications of gastritis, of encephalitis, &c. must be treated with more or less energy according to their intensity. (See Gastritis and Encephalitis.)

Organic alterations require surgical treatment, an ac-

count of which cannot be given here; but we may remark that these alterations would be prevented in almost every case, if we would vigorously attack ophthalmia in its commencement with the antiphlogistic treatment and with blood-letting. How many evils does the unseasonable employment of astringents produce, particularly in the acute stage! If they do not arrest the inflammation, they always determine a vital reaction, which exasperates it; either curing the disease, or giving it redoubled energy. The prudent physician will not therefore use them unless where there is no fear of reaction; that is, when the inflammation is slight or chronic.

PHLEGMASIÆ OF THE PARIETES OF THE MOUTH.

FLUXION.

We give the name of fluxion to the inflammation which sometimes develops itself in the cheek. The ordinary cause of this inflammation is cold: however, a phlegmasia primitively seated in the mucous membrane of the mouth, may by contiguity assail the cheek. Caries of the teeth often produces a violent inflammation, which resembles erysipelas. This accident occurs most frequently when cold concurs with this cause. The result of this inflammation is sometimes an abscess, which opens into the mouth; in other cases, the inflammation becomes chronic, and hence result stagnation of lymph, a deterioration of the teeth and gums, neuralgia, &c.

We must commence early with the treatment of this inflammation. We remove it by the antiphlogistics, by leeches applied internally to the commissures of the cheeks and gums, without being deterred by the temporary swelling which they determine. If the fluxion is produced by the caries of a tooth, we have it extracted; if by the accumulation of tartar, the teeth must be cleaned.

PHLEGMASIA OF THE GUMS.

GENGIVITIS.

The gums are frequently the seat of inflammation. In general there is too great a propensity to give the name of scurvy to irritations of the gums, which for the most part are of an ordinary nature.

Symptoms.

The gums are of a deep-red or livid colour, swelled, and painful; sometimes this swelling is accompanied with little ulcerations. The mucus becomes deteriorated, it exhales a fetid odour; a bloody fluid oozes out on the least pressure. All this may exist without any scorbutic affection.

Causes.

Cold, the use of poor, salted, or spiced provisions; drinks too hot or too cold; the use of tobacco in smoking or chewing; violent friction; irritating acid dentifrices; a peculiar predisposition to contract this inflammation.

Treatment.

When the inflammation is acute, if the tissues are not gangrenous, and do not fall into shreds, we employ the antiphlogistic treatment. The application of leeches to the angles of the jaws, sometimes in the interior of the mouth to the gums; emollient gargarism with honey water, with milk and water, with the decoction of mallows, &c.

A light diet of vegetables, and requiring no effort of mastication. When the heat of the mouth has diminished and the inflammation abated, recourse may be had to gargles acidulated with muriatic acid, to astringent deco-

tions made with tormentil, the bistort, rhatany, pomegranate, &c. If the antiscorbutics are used, such as the cochlearia, cresses, the aromatic wine, we generally exasperate the inflammation. We must abstain from this treatment, particularly during the acute stage.

Gastritis often accompanies this inflammation; we must then employ the treatment indicated by this complication. (See Gastritis.) The antiscorbutics may be employed when there really exists scurvy, not complicated with gastritis.

APHTHÆ.

The disease called aphthæ consists in little whitish ulcerations with red margins, which make their appearance in the interior of the mouth, on the palate, upon the gums, upon the borders of the tongue, upon the velum palati, and upon the internal surfaces of the cheeks.

Symptoms.

We first perceive little miliary eruptions upon diverse points of the mucous membrane of the mouth and of the tongue, with a red areola, and covered with grayish crusts. Profuse salivation, sometimes a swelling of the salivary glands. There is no fever, unless there be a complication of gastritis, which is not a rare occurrence, (this is the mucous fever of authors.) Infants are often affected with this complaint; they cry, refuse to take the breast, and if the affection is of long duration, they fall into marasmus, and rapidly succumb.

Causes.

The lymphatic temperament predisposes to it: the occasional causes are the same as those of other inflammations of the mouth. In infants this affection is ordinarily

occasioned by dentition, by bad nourishment, or by an unhealthy habitation.

Aphthæ have been divided into the benign, the malignant, the putrid; but there is no distinction to be established except according to the degree of inflammation. Aphthæ are here only to be considered as a disease of the mouth, the other inflammations which may be connected with it are to be regarded by us as foreign complications.

Prognosis.

The prognosis, in the case of infants, is unfavourable when the disease is of long continuance. It is exceedingly unfavourable when there exists with it violent fever, when there supervenes symptoms of adynamy or ataxy, a circumstance which always announces some important complication, principally of the cerebral and digestive organs. When this phlegmasia is confined to the mouth, it is attended with little danger.

Treatment.

In infants, on the first appearance of the disease, we should attack it by the application of leeches under the chin and to the angles of the jaws, and by emollient injections into the mouth. When the inflammation has been moderated, we touch the aphthæ with a dossil of lint dipped in water rendered slightly pungent by sulphuric, muriatic, or nitric acid, or by vinegar. If there is heat about the epigastric region, or inflammation of the colon, ordinarily indicated by diarrhœa, we employ antiphlogistics over the diseased parts. When the disease occurs among adults, the treatment should be nearly the same; topical blood-letting more profuse; gargarisms, at first emollient, then slightly acidulated; cauterization. By these means we often prevent the irritation from extending to the interior.

If aphthæ commences violently; if there are black gangrenous spots; acute pain; a complication with pneumonia, angina, or gastro-enteritis, our dependance is still to be placed on the antiphlogistic treatment; but when there exist signs of gangrene, of adynamy, or of ataxy, we must beware of employing depletion, and confine ourselves to the use of demulcents, which are the only means we can employ, although with them our success is very uncertain; this however is owing to the serious nature of the inflammation. Tonics and stimulants only accelerate the progress. We may, however, employ them, by commencing with the mildest, but this is only allowable when the inflammation has abated.

PHLEGMASIÆ OF THE VELUM PALATI, OF THE TONSILS, AND OF THE UVULA.

ANGINA TONSILLARIS.

The phlegmasiæ of these parts bear the name of angina, because they impede respiration and deglutition.

It presents itself under divers forms. 1st. The acute form, arising from the ordinary causes of inflammation. 2d. The chronic form. 3d. The malignant and gangrenous form.

Symptoms of Acute Angina Tonsillaris.

Pain; heat of the pharynx; difficulty of deglutition; a bright redness of the velum palati; a swelling more or less considerable of one or both tonsils; thirst more or less urgent. If the malady is not arrested, general symptoms manifest themselves; the pulse is frequent; there is often complication with gastritis; in this case the tongue is yellow, clammy; there is some fever, with general uneasiness and nausea. This is the angina which has been

called bilious, while the name of inflammatory has been reserved for acute angina, without complication of gastritis. This distinction is erroneous, for both are inflammatory, but the one is simple and the other complicated. It may be phlegmonous, and advance rapidly to suppuration; this often occurs when the tonsils are much swelled and painful, and there is no gastritis.

As soon as the pus is evacuated the pain ceases, and the fever is dissipated; this proves that it was kept up by the local irritation, if indeed there be no complication with another phlegmasia.

Sometimes it exists simultaneously with measles, with the small-pox, or with scarlatina. Sometimes the swelling is so considerable as to threaten suffocation, and it may, in fact, occasion death, if the disease advances rapidly, and is not promptly arrested. It is, however, to be observed, that such a termination is rare.

Symptoms of Chronic Angina Tonsillaris.

The inflammatory swelling, the redness, the heat and the pain are less than in the acute stage. Sometimes the structure of the glands undergo a degeneration, and become thickened, scirrhus, or ulcerated. These alterations are the effect of inflammation. More frequently chronic angina is kept up by a slight gastritis, by a syphilitic cause, or by an irritation purely local. We see persons for many years the subjects of chronic inflammation of the tonsils.

Symptoms of Malignant and Gangrenous Angina.

Every inflammation of the tonsils carried to a very high degree may terminate in gangrene. In this case gangrene results from an excess of inflammation, which occasions the death of the parts affected; but we are not concerned at present with this kind of degeneration. There is a

species of angina which exhibits the gangrenous character from its commencement, and which is very different from the others; it has a considerable relation to pustula maligna. The following are its symptoms:—

Frequent horripilation, nausea, anxiety, vomiting, a disagreeable sensation in the throat, hoarseness: such are ordinarily the precursory symptoms; but as they are common to many affections, we cannot from them form a decided judgment. The diagnosis becomes less ambiguous on the appearance of the following signs. The velum palati and the tonsils are slightly swelled and very red; deglutition is but little impeded: shortly there appear on the diseased parts spots or crusts whitish, grayish, serpiginous, or confluent. In twenty-four hours these spots increase and gangrene pursues its course with rapidity; the slough comes away, an abundant salivation arises, and the patient is restored to health. At other times the gangrene spreads; the whole mouth becomes black; a coryza is established with a secretion of fetid mucosities, which corrode the nose and the lips; infants are affected with diarrhœa; signs of gastric irritation and of typhus supervene; prostration of strength, delirium, and coma. From the second to the third day the skin becomes covered with petechial spots, typhoid and of a bright red colour; this eruption ordinarily disappears towards the fourth day, and the epidermis falls off; the fever becomes more and more intense, symptoms of putridity supervene, and the patient dies ordinarily from the third to the fourth day.

Causes of Angina.

The causes of acute angina are generally all those of inflammation, and particularly the sanguine temperament, youth, the vicissitudes of heat and cold, cold drinks when the body is heated, cold to the feet, hollowing, singing, declamation, irritating and stimulating substances, a con-

tiguous inflammation extending itself to the tonsils, &c. The causes of chronic angina are most frequently a preceding acute angina, or it may be chronic, that is, mild from its commencement; it is often kept up by a chronic gastritis, or the permanent action of the causes that produced it.

The causes of malignant or gangrenous angina are the same as those of pustula maligna, for we see it develop itself among individuals, who have eaten or handled the flesh and skin of animals which have been affected with carbuncle; it is then eminently contagious.

Prognosis.

Acute angina is readily cured, if attacked with vigour at its commencement. When there have been several relapses, the cure is difficult. If the phlogosis is confined to one tonsil, and this is swelled and hot, there is a tendency to suppuration; but when it occupies both glands, and the swelling is considerable and advances rapidly, it may cause suffocation before the formation of pus. When angina is accompanied with gastro-enteritis, we may presume that it will not be cured except with the latter disease.

In gangrenous angina, lividity of the ulcers, an offensive odour of the mucous secretions, great anxiety and symptoms of typhus are very alarming signs: the decrease of fever after the eruption, gentle perspiration, the return of sleep, the desire of food, and a rosy colour of the ulcers are good omens. In fine, this disease is of little importance, if it be only local; the complication of gastritis, of pneumonia, or of encephalitis, leaves but little hope.

Treatment.

That of acute angina is very simple. Abundant topi-

cal bleeding by means of twenty to fifty leeches ; pursuing this plan we sometimes remove the disease in a single day. If there is plethora, a general bleeding must precede the application of leeches. But little drink must be allowed on account of the fatigue it occasions to the velum and tonsils. If the leeches do not always disperse the inflammation, they prevent its further progress. If the swelling advances so rapidly as to threaten suffocation, we must repeat the application of leeches and use a great number; we likewise scarify the tonsils. If angina terminates in suppuration, we use gargarisms of the decoction of mallows, of honey of roses, and finally,² of a slightly astringent decoction. When the patient becomes livid, when the breath is fetid, the pulse small, the diseased parts black, and there is at the same time danger of suffocation, there is no other resource than in tracheotomy.

If angina is chronic, and kept up by a permanent cause, as cold, singing, hollowing, we must remove these causes; if by a chronic gastritis, we must combat this complication. (See Chronic Gastritis.) If it be purely local, astringent and tonic gargles are to be employed; and finally, if these means do not succeed, and the glands become hard, scirrhus, or ulcerated, we resort to extirpation.

When ordinary inflammatory angina terminates in gangrene, the antiphlogistic treatment is to be continued, and afterwards the acidulated gargles are to be resorted to. But when angina is really malignant and gangrenous in the commencement, we employ local and general stimulants, as alcohol and quinine; and for drink, the vinous lemonade. But when the slough comes away, we must suspend the use of stimulants, and replace them by emollient gargarisms and drinks.

PHLEGMASIÆ OF THE PHARYNX AND ŒSOPHAGUS.

ANGINA OF THE PHARYNX.

The pharynx sometimes becomes inflamed under the influence of the same causes as the tonsils. The œsophagus is more rarely affected with inflammation, because there are fewer sympathies between this organ and other parts of the body.

Symptoms.

It is easy to recognise this affection by the difficulty of deglutition, and the pain produced by the passage of food along the œsophagus. There exists at the same time a sensation of pain and of heat with constriction of the pharynx.

Causes.

This phlegmasia is often occasioned and kept up by that of the stomach, by the ordinary causes of angina, the presence of a foreign body in the œsophagus, the passage of hot and irritating drinks and aliments, by acid and caustic poisons, &c.

Treatment.

It varies little from that of angina tonsillaris. Local blood-letting, emollient drinks, revulsives; if there is a concomitant gastritis, the complication must be treated appropriately. If foreign bodies are engaged in the œsophagus, they must be made to descend into the stomach, or be extracted by the means indicated in such cases.

PHLEGMASIÆ OF THE MUCOUS MEMBRANE OF THE AIR
PASSAGES, THE LARYNX, THE TRACHEA, AND THE
BRONCHIA.

The mucous membrane that lines the larynx, the trachea, and the bronchia, is very often the seat of an irritation; thence the passage to the lungs is frequent and easy. The history of these phlegmasiæ is in the highest degree interesting.

When the irritation occupies the whole of the mucous membrane of the bronchia and of the trachea, or even of the larynx, it is called catarrh; its proper name would be bronchitis or tracheo-bronchitis. Confined to the mucous membrane of the larynx, it is called angina laryngæa; and if it at the same time involves the trachea, it is called angina laryngæo-trachealis. In infants, angina laryngæa is called croup. Catarrh with convulsions is called whooping cough. When angina laryngæa passes into the chronic state, with organic alterations of the affected parts, it is denominated phthisis laryngæa. The name of angina œdematosa has been given to a phlegmonous inflammation of certain tissues of the larynx, other than the mucous membrane. We shall proceed to treat of these different divisions.

BRONCHIAL OR TRACHEO-BRONCHIAL IRRITATION.

PULMONARY CATARRH.

This is the most simple mode of irritation. It may exist in different degrees in the tracheo-bronchial mucous membrane: we must not therefore expect to find its exact model in any one shade of disease. It is sufficient to be well assured of the irritation, which presents itself under

different aspects without changing its nature, according to its degree, the temperament of the patient, the complications and sympathies which it developes. As we must nevertheless describe one of these forms, we proceed to describe that which presents itself most frequently.

Symptoms.

Bronchial catarrh generally commences with coryza; on the second or third day the irritation has generally passed into the larynx. At other times it commences with a tickling in the throat, which extends itself towards the tracheo-bronchial mucous membrane; under other circumstances it commences in the bronchia; there is then a sensation of cold at the top of the chest, and a tickling which provokes a deep cough. If there is coryza, besides the ordinary symptoms of this affection, there are those which announce the extension of the irritation to the tracheo-bronchial mucous membrane. A sense of fulness in the chest; lassitude; general uneasiness; a cough, at first dry, wheezing, and harassing; expectoration of mucosities, at first irritating; sometimes there are very painful, violent, and convulsive fits of coughing; some patients think they feel a laceration in the interior of the chest. There often supervene symptoms announcing the communication of the irritation to the mucous membrane of the stomach; a slight fever, a frequent pulse, redness of the tongue, frontal pains, &c.

These symptoms having continued some days, the irritation decreases, and the cough becomes less painful; the expectoration is abundant, thick and of a purulent aspect, the respiration is less difficult, the appetite returns, and expectoration continues for some days; the rheum is now ripe, as they say, an occurrence which takes place at a much earlier period in summer than in winter, because during the latter season, the skin being exposed to the in-

fluence of cold, vital action is exalted in the interior. It may degenerate into chronic catarrh.

Causes.

The same as those of angina and coryza; the most frequent are the vicissitude of heat and cold, and particularly sudden cold, when the body is heated, as on going out of the ball room, or an exhibition, &c. either owing to the influence of the air on the skin, which suddenly suppresses its action, and throws itself either upon the lungs or the pulmonary mucous membrane, or owing to the respiration of cold air. Cold can likewise produce this affection in many other ways, its effect however is always produced by determining an irritation of the mucous membrane; and it is this irritation alone that should occupy the attention of the physician.

Prognosis.

Simple catarrh is not a serious disease, it only becomes so when inflammation invades the tissue of the lungs, an event of frequent occurrence, from the habit of considering catarrh as of no moment, and therefore neglecting it. Sometimes the inflammation transfers itself suddenly to the lungs, and we have an acute pneumonia. In other individuals the catarrh abates during some time, it then returns, and thus comes and goes several times. The mucous irritation may last in this manner several months, and insensibly give rise to tubercles, to pulmonary phthisis, or in language more exact, to chronic pneumonia.

Treatment.

The treatment consists in removing the patient from the influence of the causes, and in the employment of antiphlogistic means in all their energy, to guard against pneumonia, which a prudent physician should always ap-

prehend. If the catarrh is acute, it demands the application of leeches over the trachea, and between the inferior insertions of the sterno-mastoid muscles; their number must be proportioned to the acuteness of the inflammation, and the strength of the patient; twenty, thirty, forty, fifty, or more; emollient cataplasms to the neck and the chest, diet, confinement to bed, warm diluent drinks, under this treatment the catarrh readily disappears. If it be less violent, we do not resort to local bleeding; but if the catarrh is very intense, the respiration wheezing, the cough very painful, and the patient strong, the application of leeches must be preceded by the abstraction of blood from the arm. What shall we say of the use of hot wine, of punch, of sudorific drinks, of alcoholized tea, and other exciting articles prescribed by some physicians as remedies in catarrh? These medicines, in arousing the action of the skin, diminish that of the mucous membrane, and thus sometimes operate a cure; but instead of producing this transfer of action, they often aggravate the irritation already existing, and fix it more deeply in the membranes which it occupies; if there is a complication of gastritis, which is by no means uncommon, it must necessarily augment it. This treatment, the effect of which is to cure or double the disease, will never be resorted to by a prudent physician, unwilling to sport with the lives of his patients.

We shall treat of chronic catarrh at a later period, on account of its connection with chronic pneumonia.

ANGINA LARYNGÆA, OR LARYNGÆO-TRACHEALIS IN ADULTS.

This is a catarrh predominating in the larynx, or in the trachea and larynx, instead of extending over the whole mucous membrane of the pulmonary apparatus. This irritation is acute or chronic.

Symptoms.

Pain, a burning heat in the larynx, sensibility increased by the touch, hoarseness, cough. If the patient is of an irritable constitution, there may be fever, difficult respiration accompanied with a kind of rattling or wheezing sound; the paroxysms of cough are very painful, sometimes accompanied with convulsions; the patients are averse to deglutition, particularly in the case of liquids, on account of the pain which they occasion; this fear has in some cases rendered them completely hydrophobic. The symptoms augment in intensity, albuminous concretions are formed in the passage, which are thrown up after many fits of coughing. These are not always formed in adults, as the mucous membrane is more dry and secretes less than among infants.

When there is a formation of false membranes, (the result of secretion augmented by irritation,) this angina does not differ at all from the ordinary croup of infants.

Causes.

The same as those of tracheo-bronchial catarrh.

Prognosis.

This irritation by itself seldom occasions death among adults. If it be very intense, it may extend to the lungs and cause death. If it is not properly treated, it may become chronic and degenerate into laryngeal phthisis. Its duration whether in the acute or chronic state is very various.

Treatment.

At the commencement of the disease, the treatment should be vigorously antiphlogistic; the irritation must be attacked without delay, by the application of leeches, to

be repeated again and again, over the larynx and trachea; emollient cataplasms; little drink should be administered on account of the pain it occasions, which may augment the irritation; it would be preferable to administer from time to time small lavements. When the albuminous secretions have been formed, (if indeed they do form,) we need no further application of leeches, but our attention is to be directed to the expulsion of these mucosities. Authors have greatly lauded the sulphuret of potash and the carbonate of potash, as proper medicines for this purpose; but ipecacuanha in divided doses, or even tartar emetic, if the stomach is sound, are the means which succeed best. When the false membranes have been expelled, if there is still inflammation, we must continue the antiphlogistic treatment, and even return to the application of leeches, if the inflammation retains its acuteness; but in general, revulsives externally, and demulcents internally, are preferable, after the first degrees of inflammation. This then, is the general outline of the treatment: to calm the irritation at its commencement by topical blood-letting and emollients, if there is the formation of a false membrane to favour its expectoration with ipecacuanha or tartar emetic; afterwards to employ revulsion externally, and demulcents internally; to treat the complications that may exist by suitable means; if there is gastritis, to apply leeches over the epigastric region, or to employ the emollient treatment alone, according to the intensity of the disease.

ANGINA LARYNGÆA OF INFANTS.

CROUP.

The croup is an inflammation of the mucous membrane of the larynx. Sometimes it is only a catarrh, which be-

comes exasperated to such a degree as to produce angina. At other times the access of the disease is violent; we then see the infant suddenly seized with pain, heat and swelling of the larynx, fever, and suffocation. In every case it is an inflammation; this inflammation is of the same nature as among adults; but as in infants the mucous membrane is more moist, and the respiratory canal more narrow, the albuminous secretion, which concretes into a false membrane is more abundant, and the danger of suffocation more imminent.

Symptoms.

Laryngeal angina, with the form of croup, generally manifests itself in infants after the time of weaning; it much more rarely makes its appearance among adults. There is pain at the upper part of the trachea, often without any apparent external tumour; the peculiar sound of the croup characterizes the cough and the cries; this sound, which has been compared to the crowing of a cock, seems as though it came from a metallic tube; the respiration is difficult, and attended with a sibilant noise; the cough is convulsive and dry in the commencement; suffocation is threatened. Sometimes there is an expectoration of membranous concretions; the face is livid or red, especially during the fits of coughing; there is often fever, the pulse is frequent and weak, and the patient may be carried off suddenly by suffocation.

Causes.

Cold, the vicissitudes of heat and cold, humidity of the atmosphere, the inspiration of irritating vapours or gases, and a particular predisposition.

Prognosis.

The danger is in proportion to the intensity of the in-

flamation, and particularly to the quantity of albuminous secretion, on account of its tendency to produce suffocation. A sibilant and stertorous breathing, great anxiety, and violent fever, are ominous: the expectoration of the false membrane, free respiration, and a voice nearly natural, are very favourable signs.

Treatment.

By administering the tartar emetic at the commencement, we can operate a salutary revulsion; but are we sure of producing this effect? May we not exchange an irritation of the larynx for a serious gastritis? besides, may not a gastric irritation be added to the laryngeal one, and thus increase the danger? Unhappily, experience proves how well founded these apprehensions are, and some instances of success occurring now and then should not authorize a treatment so contrary to all the laws of physiology.

The name of croup is of no consequence: our object is to arrest the progress of the irritation, for we have here to do with an irritation of the mucous membrane of the larynx and trachea. If then we are called at the commencement of the disease, we must employ topical blood-letting, and repeat it more or less frequently, by means of four, five, or six leeches applied over the seat of the disease. We must use a much greater number in the case of adults. Emollient cataplasms, mild drinks, and pediluvia. When the membrane is formed, we favour its expulsion by the use of ipecacuanha in divided doses; when the intensity of the inflammation has abated, we may cautiously employ revulsives on the alimentary canal, for example, a few grains of calomel; but this is on condition there exists no intestinal irritation. It is often the case that gastritis accompanies the croup; in this case we apply leeches to the epigastric region. We should cease

bleeding after the production of the false membrane; when it is expelled we confine ourselves to demulcent remedies.

CONVULSIVE IRRITATION OF THE AIR PASSAGES.

HOOPING COUGH.

Hooping cough is a catarrh or irritation of the tracheo-bronchial mucous membrane, with a convulsive cough. It is principally seen among children and nervous women.

Symptoms.

The symptoms during the first days are those of pulmonary catarrh, or of laryngeal angina, afterwards there occurs a convulsive cough, which is often repeated fifty, sixty, or eighty times without intermission. The fit generally terminates by the vomiting of mucosities, and the patient finds himself in a state of extreme exhaustion. Redness of the eyes, and of the face; a swelling of the veins, and a throbbing of the arteries of the face and of the neck; sometimes the excrements and the urine escape involuntarily; difficult inspiration; a peculiar sound of the voice during coughing, (it has been compared to the cries of the wolf.) The attacks are irregular.

The duration of the convulsive catarrh varies with the circumstances, the age, and the temperament of the person affected: sometimes it continues during entire seasons; it often terminates by vomiting. It may degenerate into pneumonia or laryngeal phthisis; the blood may accumulate in the head, under the influence of the paroxysms of cough, and determine convulsions, and even epilepsy; the heart and the great vessels may undergo considerable dilatation, occasioned by the stagnation of blood in the lungs, &c.

Causes.

The irritation of the pulmonary passages is associated, (probably,) with a nervous irritation. The occasional causes are consequently those of ordinary catarrh. Infants are more liable to it than adults. It sometimes prevails epidemically, under the influence of a peculiar atmospheric constitution. The seat of this disease has been improperly referred to the stomach, on account of the convulsive cough often terminating by vomiting. But autopsy solves the difficulty; in fact, we only find traces of inflammation and organic alterations similar to those we observe as the result of ordinary catarrh, of pneumonia, and of laryngitis: sometimes we find signs of gastritis, an engorgement of the brain, or an aneurism of the heart.

Prognosis.

This disease is almost constantly fatal among infants under eighteen months or two years of age. When it continues a long time, there is danger of its degenerating into chronic pneumonia or into laryngeal phthisis, and if it be violent, it may be productive of the accidents we have already noticed.

Treatment.

At the commencement, the treatment is the same as in ordinary catarrh: leeches to the larynx and trachea; the number of leeches, and the repetition of their application, must be determined by the age and strength of the patient, and particularly by a consideration of the intensity of the inflammation; the bites are to be covered with emollient cataplasms; mucilaginous drinks, pediluvia rendered stimulating with mustard, milk and vegetable diet. If the patient is threatened with pneumonia, with pleurisy, with cerebral congestion, with dilatation of the heart, ge-

neral bleeding must be resorted to, followed with topical depletion over the parts menaced with inflammation. When the inflammation has been subdued by the blood-letting, and the emollients have been continued for a sufficient length of time, we must combat the convulsive disposition with antispasmodics. Experience seems to have demonstrated the superiority of belladonna over the others. We administer it first in the dose of an eighth of a grain, then of a sixth, and finally of a quarter of a grain, repeated five or six times during the day; this remedy, however, is only to be resorted to after the employment of the antiphlogistic treatment, and when the state of the alimentary canal is sound. If the paroxysms of cough are periodical, we may administer the sulphate of quinine after the antiphlogistic treatment, and under the same restrictions as the belladonna or other antispasmodics.

CHRONIC LARYNGITIS, OR TRACHEITIS.

The inflammation of the mucous membrane lining the passage to the lungs often becomes chronic; hence result, sometimes, ulcerations, or other local organic alterations: we then denominate it laryngeal or tracheal phthisis.

Symptoms.

Pain in the larynx, the trachea, the origin of the bronchia, or behind the sternum, according to the seat of the disease, alteration of the voice, the hoarseness of which is greater or less, according to the seat of the disease; it is less if the irritation predominates in the bronchia; it is much greater if the larynx is chiefly affected. Besides this, pain is developed by pressure, if the larynx is most affected; but if the inflammation be most violent at the bifurcation of the bronchia, the patient may experience attacks of asthma and of suffocation; the voice is wheezing; respiration is laborious; it is attended by a species of rattling, (*râle*.) There is

expectoration of false membranes, of small flakes of thick whitish mucus, sometimes resembling bits of cheese, or of small calculi enveloped in a caseiform matter, &c. the uneasiness of the patient augments when the atmosphere is damp.

In the commencement there is no fever; but if the disease continues, fever supervenes with exacerbation in the evening, there is redness of the cheeks, heat of the skin, night sweats; in the morning there is a remission of all these symptoms of chronic pneumonia, (*phthisis pulmonalis*.) The symptoms enumerated announce the invasion of the pulmonary parenchyma by the inflammation.

Causes.

An acute inflammation, such as tracheo-bronchial catarrh or angina of the larynx; sometimes the chronic form of the disease develops itself at the commencement, and without being preceded by the acute stage; this takes place under the influence of mechanical causes, singing, declamation, or other efforts of the voice; blows upon the larynx, &c.

Prognosis.

As long as there is no organic irritation of the larynx or trachea, as long as the inflammation has not invaded the parenchyma of the lungs, there is hope. There is however but little prospect of recovery in the first cases, especially if the disease continues notwithstanding the use of the curative means we are about to point out; in the second case, which is recognised by the existence of hectic fever, and the other symptoms of chronic pneumonia, there is no possibility of a favourable issue.

Dissection exhibits redness of the mucous membrane of the larynx and trachea, sometimes caries of the cartilages of the larynx, and ulcerations covered with false mem-

branes; sometimes tubercles result from the swelling of the bronchial ganglions, and many other kinds of disorganization are observed; we often meet with structural derangement in the tissue of the lungs of the same nature with those occurring in chronic pneumonia; very frequently there are profound traces of gastro-enteritis.

Treatment.

The language of ancient physicians was, if there are tubercles, nothing can be done, but if not, the patient may be cured. The language of physiological physicians of the present day is, as tubercles are nothing but the product of inflammation, let us prevent their formation by attacking this irritation at an early period, and with perseverance. In pursuance of this plan, if there is acute catarrh, we treat it according to the method already laid down; if it exists in the chronic form, whether primitively or consecutively to the acute, we must not give time for the formation of ulcers or tubercles. We shall therefore insist upon the employment of topical depletion; the application of leeches over the larynx and trachea, in small numbers; this is to be often repeated, and to be persevered in during several weeks or even months. Fomentations and emollient cataplasms are to be used, afterwards moxa is to be applied in three or four places, on each side of the larynx. After topical bleeding, this kind of revulsion has produced astonishing effects in cases that appeared desperate. It is proper to insist upon this means when there is dyspnœa and wheezing respiration. When there is constriction or convulsion of the larynx, and the antiphlogistic and revulsive treatment has been continued for a sufficient length of time, we may administer some of the antispasmodics, such as opium, in an appropriate vehicle, or emulsions slightly camphorated, but we must not push too far their employment.

If the disease resists the local bleedings, and the moxa, the danger is extreme. The food should be of the mildest kind; milk, if the patient digests it with ease, gruel of substances containing fecula, prepared with milk or fresh butter, cooked fruits and fresh vegetables, are the only suitable aliment. If irritation of the larynx has succeeded an arthritic affection, or the suppression of an habitual evacuation, such as the hæmorrhoids, we employ revulsion upon the parts primitively affected, with the view of recalling the irritation to the part which it occupied at first.

ŒDEMATOUS ANGINA.

This is an inflammation of the body of the larynx, which should not be confounded with irritation of the mucous membrane.

Symptoms.

There are positive symptoms which indicate the seat of the inflammation; there are negative ones which demonstrate that this seat is not the mucous membrane. The former are, difficulty of respiration; a feeling of strangulation; swelling; sensibility of the larynx developed by the touch; the latter are, the absence of cough, of the râle, and the voice remaining unchanged. This phlegmasia seems to commence in the tissues situated between the cartilages. The swelling of the larynx comes on by degrees, the surrounding cellular tissue becomes œdematous, and impedes respiration; an abscess is established, which obstructs the passage to the lungs, and the patient dies of suffocation; this event may occur, owing to the tumefaction alone, and before the establishment of suppuration. Sometimes this inflammation pursues a rapid course; at other times its progress is tedious and chronic, and may continue during many years.

Causes.

The causes are, in general, those of inflammation; in particular, they are external violence; the cravat worn too tight; cold; singing; loud cries. This malady seems to choose for the objects of its attacks lymphatic individuals, and those of a scrofulous constitution.

Prognosis.

It is unfavourable if the disease be not attacked with energy in its commencement, because the inflammation may promptly bring on disorganization. The chronic state is the more dangerous, because it often determines caries of the cartilages. The formation of abscesses internally may rapidly produce suffocation; if they open externally, the patient may be cured.

Treatment.

The treatment must evidently be of the most prompt and energetic character, on account of the imminence of the danger. Thus we repeat, time after time, the application of leeches to the larynx and its vicinity, to the number of twenty, thirty, forty, or fifty; emollient cataplasms, diet, and pediluvia rendered irritating with mustard. If the inflammation is very acute, venesection should be practised before the application of leeches. If the disease is far advanced, and there exists disorganization, leeches and diet would only reduce the patient to no purpose; we then have recourse to revulsives, the moxa, dry cupping, blisters, and palliative remedies. If an abscess threatening suffocation has formed in the interior, we endeavour to give an outlet to the pus, by resorting to a suitable operation in the interior of the larynx, or on the exterior, according to circumstances. Finally, we practice tracheotomy, if there is no other way of prevent-

ing suffocation; we however have recourse to this means only when there exists some hope of cure.

PHLEGMASIÆ OF THE PECTORAL VISCERA.

Hitherto we have only discussed phlegmasiæ limited to the mucous membranes of the air tubes; we now proceed to the consideration of those of the parenchyma of the lungs, of their envelopes, (the pleuræ,) of the pericardium, and of the heart. Inflammation of the tissue of the lungs is called pneumonia; when it occupies, at the same time, the tissue of the lungs and the pleura, it takes the name of pleuro-pneumonia; confined to the pleuræ, (an extremely rare case,) it is denominated pleurisy or peripneumonia. The inflammation of the pericardium is called pericarditis; that of the heart has different names, such as carditis, aneurism, &c. When pneumonia passes into the chronic state it is called phthisis pulmonalis. Chronic pneumonia is a more proper appellation, because it indicates better the nature of the affection. No matter, however, what the names may be by which these diseases are designated, the physiological physician knows that in the ultimate analysis, he has to deal with an irritation which is always identical, and of which it concerns him to know the seat and the intensity, as well as the structural derangement which it has produced or may produce. The senseless nomenclature, based upon fugitive symptoms, and not upon the state of the organs, serves only to obscure the science, and to destroy simplicity of treatment.

ACUTE PNEUMONIA AND PLEURO-PNEUMONIA.

Pneumonia is sometimes preceded by bronchial catarrh. The inflammation passes then from the bronchia into the areolar tissue of the lungs, or it arrives there by the pleura.

At other times it develops itself suddenly in the lung itself.

Symptoms of Acute Pneumonia.

Whatever may be the route which irritation has pursued, the following are the symptoms indicating the existence of its seat in the pulmonary areolar tissue: shivering; great oppression; the shivering does not occur if the catarrh has preceded the pneumonia; dyspnœa, a sense of suffocation, a deep cough, pain of the side, generally fixed, pungent, sometimes obtuse, with a sense of weight, felt most frequently under the sixth or seventh rib, sometimes under the scapulæ, the clavicles, or the sternum; this pain augments considerably, if the patient attempts to make a full inspiration; decubitus painful upon the side opposite to the seat of the disease, more easy upon the back if both sides are affected, cough more or less violent from the beginning: at first scarcely any expectoration, afterwards an expectoration more or less abundant, viscid, and mixed with bloody striæ, a species of râle, or rattling, rendered perceptible by the cylinder, a dull sound produced by percussion over the seat of the inflammation; this seat is at the upper part of the lungs, when a catarrh has preceded the pneumonia; when it comes on suddenly it generally occupies the middle or inferior part of the pulmonary structure. The pulse is full, large, and hard; but the fullness ceases if the disease advances; there is a deep red colour of the face, and particularly of the cheek of the affected side; there is often complication of gastritis, (under the form called bilious, or inflammatory, &c.)

When pneumonia proceeds rapidly, the sound elicited by percussion becomes more and more dull, the respiration is more accelerated, the pulse more rapid, the colour of the cheeks becomes livid, sometimes the centre of the cheek is surrounded by a yellowish circle, a profuse per-

spiration bathes the neck, the face, and the chest; watering of the eyes, anxiety and distress of countenance, an expectoration by no means abundant, and sometimes bloody, the gurgling sound of the chest increases, the pulse becomes small, wiry, rapid, in a short time the patient cannot sit up in bed, sometimes the want of respiration is urgent, and yet the patient is unable either to breathe, to speak, or to drink, on account of the pain it occasions; he only gives utterance to a word at a time; he experiences a sense of suffocation; the extremities become cold, a viscid sweat breaks out over the whole body, and death occurs sometimes at the end of two, three, or four days; at other times the disease is of longer continuance; in the greater number of cases it is cured; when this takes place, all the symptoms diminish gradually in intensity, the respiration becomes more free, a gentle moisture overspreads the skin, the expectoration becomes abundant and easy, the pulse becomes less frequent, the pain diminishes, &c. hæmoptysis is sometimes observed to supervene and dissipate the pneumonia; this hæmorrhage may be considered in many cases as the natural remedy of pneumonia.

Symptoms of Acute Pleuro-pneumonia.

Inflammation of the lung, or pneumonia, is often attended with that of the pleura, or with pleurisy; the latter may also exist alone, particularly in the commencement. Pleuro-pneumonia may exist on one side alone, or there may be pleurisy of one side and pneumonia of the other. In this case there is acute pain of the pleuritic side, which is augmented by pressure or percussion, the patient scarcely dares to respire or to cough, because the movement of the ribs necessarily occasions that of the pleura, which render the pain more intolerable; sometimes the patient is incapable of drinking, of speaking, or

of changing his position. The sound is ordinarily clear over the pleuritic point, and dull over the part where the lungs is affected, but as the inflammation ordinarily travels from the pleura to the corresponding part of the lung, the sound there in a short time changes from distinct to dull. As long as inflammation is confined to the pleura, the pulse is frequent, quick, less full and not so large as in pneumonia; the corresponding cheek is less red, the visage less swelled, and the expression of the countenance less unfavourable. In simple pleurisy the cylinder indicates no change in the respiration, but if two or three days later, we perceive a crepitation, a species of 'râle', or a gurgling noise, the inflammation has reached the tissue of the lungs, for this noise is occasioned by the passage of air through mucosities, the secretion of which is augmented by the inflammation. If the disease continues, there may supervene organic alterations, such as hepatization, tubercles, gangrene, empyema, adhesion of the pleura, hydrothorax, &c. The parts affected are no longer fit for respiration, and the cylinder transmits no sound. Thus, when a patient suffers from a state of dyspnœa, if there is a dull sound in a part formerly affected, and acute pain on pressure, in the same or another place, we have a pleuro-pneumonia. In simple pleurisy there is acute pain augmented by the touch, and inflammation of the two pleuritic surfaces which correspond to each other; the ribs then remain motionless on account of the pain.

Pulmonary irritation may then attack the parenchyma of the lung alone, constituting pneumonia; or the pleura alone, constituting pleurisy; or it may assail both at the same time, giving rise to pleuro-pneumonia. Sometimes catarrh, pneumonia, and pleurisy exist simultaneously.

Gastro-enteritis is often found accompanying irritations of the lungs. In this case, to the preceding symptoms are joined those which indicate this complication, redness of

the tongue, a bitter taste, a fuliginous state of the mouth, pungent heat of the skin, thirst, &c. according to the intensity of the gastro-enteritis. The bilious, gastric, malignant, putrid, adynamic, &c. pleurisy and pneumonia of authors, are only ordinary pleurisy and pneumonia complicated with gastro-enteritis, the form of which varies with the intensity of the inflammation and the constitution of the subject; on this subject dissection leaves no doubt. (See Gastritis and Gastro-enteritis.) Acute pneumonia or pleuro-pneumonia may terminate by resolution, suppuration, gangrene, hydrothorax, or chronic pneumonia.

Causes.

Pneumonia may be referred to irritation of the bronchial mucous membrane, extending thence to the areolar tissue, as its first cause. The most ordinary cause is cold, which acts externally, diminishes the action of the skin, and checks the pulmonary transpiration; or it may act internally by means of cold drinks, or the inspiration of cold air when the lungs are much heated, as on coming out of the ball-room or a numerous assembly, or after violent exercise; every thing that throws the blood upon the lungs or causes their engorgement, such as strong emotions, which determine chilliness of the surface and the concentration of heat in the interior; the chill which ushers in the fever in intermittents, the vicissitudes of heat and cold, irritating gases, singing, and declamation. These different causes may produce catarrh, pneumonia, or pleurisy. To these causes may be added external violence, as blows and falls upon the chest. The organic alterations which we find constantly at the termination of these maladies, are the consequence, never the cause of the irritation.

Prognosis.

When very acute, this disease may prove fatal in three or four days. A very difficult respiration, a frequent and very painful cough, great anxiety, delirium, the respiration becoming suddenly accelerated and short, a gurgling sound, and coldness of the feet, are signs which indicate the violence of the inflammation and the imminence of the danger. An easy expectoration of yellowish thick matter, sometimes tinged with blood, without violent cough; an epistaxis, or an hæmorrhagy by the hæmorrhoidal vessels, or the eruption of an external irritation, announces that the inflammation is not very intense, or that a translation of irritation, (metastasis,) has occurred, which is generally favourable.

We may apprehend suppuration when the symptoms persist with the same intensity during twelve, thirteen, or fourteen days. We may suppose that it already exists, if the pain diminishing, the dyspnœa continues; if there are shivering, hectic fever, and decubitus more easy on the affected side. We may judge that there is effusion, if the respiration becomes suddenly embarrassed and hurried, and the patient is obliged to have his body elevated for the purpose of executing it.

Treatment.

Rigorously antiphlogistic. It is of importance to lose no time, on account of the rapid progress of this disease. General blood-letting, abundant and repeated, is peculiarly suited to pneumonia, and topical to pleurisy; but we may follow up the general with topical bleeding, when there is heat at the top of the sternum, (this is bronchial catarrh,) leeches should then be applied to the lower part of the neck, over the course of the trachea.

In violent pleurisy, a general bleeding may precede the

local; this last may be performed by means of leeches to the number of thirty, forty, fifty, and upwards, or by means of cups; this is one of the cases where cupping or leeching may be used indifferently. We repeat often, and with confidence, the application of leeches, if the symptoms persist.

It is difficult to determine at what period of the disease we should employ blood-letting; here the violence of the inflammation must serve as our guide; we may generally employ this remedy when the pain is intense and of little extent, no matter what may have been the duration of the disease, even though it may have existed for thirty or forty days. It is absurd to say that in this disease we should not bleed after the fourth day. Bleeding should be discontinued when prostration supervenes, should this occur on the third day. It is also improper when the dull sound exists over a great extent. Bleeding under such circumstances hastens the fatal termination.

If there is a complication of gastritis, or of gastro-enteritis, authors advise purgatives and emetics, especially when the bilious shade exists. Many cases of cure are cited, but as a revulsion is operated by these means, there is never a certainty that they will not occasion a greater irritation than already exists; this never fails of being the case if the gastro-intestinal irritation possesses ever so slight a degree of intensity: thus, in the cases called bilious pleurisy, bilious catarrh with inflammatory angiotenic, &c. fever, it is a more rational and certain mode of treatment, to apply at the commencement leeches to the epigastric region. If evacuants could in any case be called for, it would rather be where there was no complication of gastritis; but the experiment is always uncertain.

After bleeding, as well general as local, we employ revulsives, but it is essential that the inflammation be first subdued or very much abated; for blisters applied during

the acute stage almost always augment the inflammation. The blisters should be applied to the chest itself, and not to the thighs or arms, where revulsion is impossible.

The diet should be severe or absolute, if the inflammation is violent; and if there is a complication of gastritis, mucilaginous drinks should be administered, no acids should be allowed, as they augment the cough and thus increase the irritation.

If after all these means, the cough continues, we may give the patient some emulsion, or an infusion of the flowers of orange, containing a small quantity of opium, on condition however, that there does not exist the slightest complication of gastritis, which is known by the cleanness of the tongue and the absence of the other symptoms of this complaint. During the convalescence, we pursue the same course as in gastritis. (See Regimen of Convalescents.)

PERICARDITIS.

This is an inflammation of the serous membrane which surrounds the heart; it has a considerable relation to pleurisy, but it less frequently occurs.

Symptoms.

Pain at the region of the heart augmented by pressure, the movements of this organ are irregular, quick, tumultuous, pulse is ordinarily wiry, small, quick, sometimes intermittent; the pulse may be developed in the beginning, and afterwards become small in proportion to the progress made by the irritation; immobility of the ribs which cover the heart, respiration embarrassed, interrupted; a sense of suffocation arising from a stagnation of blood in the lungs, a tendency to syncope, because the heart cannot distribute the blood in a uniform manner to the different viscera; a fear of falling into a state of debility and

even of death. Pericarditis may accompany pleurisy; this complication is easily recognised. (See Symptoms of Pleuro-pneumonia.)

It may be complicated with gastritis, or with gastro-enteritis; the redness of the tongue, and the other symptoms of gastritis readily point out this complication.

Causes.

Cold, mechanical lesions, blows, falls, pleuritic inflammation, extending itself to the pericardium. It is often produced by arthritic or muscular irritation repeated on the pericardium; it is this that is then improperly said to be gout, or rheumatism, attacking the heart.

Prognosis.

Very violent pericarditis may be mortal in as short or even a shorter space of time than pleurisy or pneumonia; there is often formed in a very short time a purulent collection which embarrasses more and more the motions of the heart, and leaves but little hope. Cold sweats, convulsive movements, and frequent syncope, are the precursory signs of death. If the pulse preserves or resumes some degree of largeness and slowness, it is a good sign.

Treatment.

The same as that of acute pleurisy; but to be successful, we must treat the disease with boldness, and from the commencement; for if we do not see the patient for two or three days after the commencement, there is scarcely any thing to be hoped for from any kind of treatment. The appropriate remedies are local bleeding, frequently repeated; absolute rest; silence; severe diet; and emollient drinks. The complications of pneumonia, of pleurisy, or of gastritis, are a further motive for insisting upon the antiphlogistic treatment.

When the inflammation is subdued, revulsives are proper.

CHRONIC FORMS OF IRRITATION OF THE PECTORAL VISCERA.

All the irritations of the pectoral viscera, which have been treated of, are capable of assuming the chronic form. These chronic irritations most frequently succeed the acute form; but they may be mild from the beginning, without having been preceded by the acute form.

CHRONIC PULMONARY CATARRH.

It often happens that prolonged irritation of the bronchial mucous membrane terminates in chronic pneumonia. We judge that it has interested the pulmonary structure when fever supervenes, or the slight febrile motion already existing, continues; when there are nocturnal exacerbations; acceleration of the pulse; redness of the cheeks; a dull sound below the clavicles. In this case the disease is serious, constituting chronic pneumonia, or pulmonary phthisis, of which we shall presently treat. It is, therefore, necessary to characterize well the disease of pulmonary catarrh, to prevent its leading to such a catastrophe.

Symptoms of Chronic Pulmonary Catarrh.

While the phlegmasia is confined to the mucous membrane of the bronchia, there is habitual cough; expectoration of mucosities, clear or opaque, whitish, sometimes in small quantity, at other times in great abundance. These symptoms are augmented in intensity by cold feet; by the passage from a warm to a cold temperature; and after a repast, or violent exercise. On waking, the pa-

tient feels a desire to expectorate, or he is even wakened by the necessity of expectoration, produced by the accumulation of mucosity in the bronchia, during sleep; but it is essential to remark that there is no fever; no dull sound; the cylinder transmits a rattling or rather a profound agitation of mucosities: the appearance of these symptoms is the signal of the invasion of the lungs. Many individuals carry for a long time this bronchial irritation without being incommoded by it; it may persist during many months, and even many years; it may very readily return to the acute stage, under the influence of the slightest causes, and thus carry off the patient.

Causes.

Most frequently chronic catarrh is consecutive to the acute; it is produced and kept up by the same causes. Catarrh may co-exist with pneumonia, pleurisy, aneurism of the heart, or gastritis.

Prognosis.

If pulmonary catarrh be not arrested, three things may occur: it may pass to the acute state; it may determine chronic pneumonia with all its forms; or it may give rise to lymphatic engorgements, (tubercles,) around the bronchia, in the same manner as gastro-enteritis produces inflammation of the glands of the mesentery: this happens chiefly among lymphatic individuals. There is hope as long as irritation is confined to the mucous membrane; but when the lung is deeply affected, particularly when catarrh has existed for a long time, there remain no grounds of hope. We may regard chronic catarrh as the most frequent cause of chronic pneumonia, (phthisis pulmonalis,) because, under the pretext that this is but a rheum, time is given for the irritation to extend itself to the tissue of the lungs.

Treatment.

In strong, sanguine, plethoric subjects, the treatment should be antiphlogistic; from time to time local bleeding by means of ten, twelve, or fifteen leeches to the trachea; the removal of the causes which may keep up the disease. In subjects who are weak, lymphatic, badly nourished, and badly clothed, the pulmonary catarrh may continue during the whole bad season, and not cease until the return of warm weather; the proper plan then is to feed these patients well, and to clothe them warmly; to allow them a little wine; to administer some of the tonics, such as Iceland moss; light decoctions of bark; some sudorific drinks; squills in a mucilaginous draught, &c. A blister upon the chest sometimes has marvellous effects; but the employment of stimulants requires much prudence. If we pursue the plan of routine practitioners, and know not how to stop at the proper point, we may produce gastritis, or chronic pneumonia.

If complications of gastritis, of pneumonia, of pleurisy, of hypertrophy of the heart supervene, we treat these complications by the customary means, (see these diseases.) If the catarrh assumes the acute form, we employ local bleeding, and a treatment decidedly antiphlogistic.

CHRONIC PLEURISY.

Ancient authors have often confounded this disease with dropsy of the chest, and aneurism of the heart, or rather they have given these names to what was in reality a chronic pleurisy. Chronic pleurisy is an irritation of the pleura. Under the influence of this irritation the secretions may become changed, and give rise to a serous or purulent collection; this collection may compress the lungs, and lead to the suspicion of their being in a state of atrophy; adhesions of the lungs may be formed and an

infinite number of other alterations, which are nothing but the result or the symptoms of pleuritic irritation. It is then this irritation which should fix the attention of the physician; the symptoms should only serve to indicate the disease, instead of being considered the principal disease.

Symptoms.

When the acute form has preceded, it is very easy to recognise the chronic. The fever ceases, the patient regains his strength, the appetite returns; but he is out of breath after walking, and after a meal, he coughs a little, he has dyspnœa, the sound becomes dull in the place where the pain was felt, and this sound even extends over a great part of the lung, proving, either that pneumonia is joined to pleurisy, or that there is an effusion. When pleurisy has not commenced with the acute stage, but has made its approach in a slow, occult, and insidious manner, it is usually neglected, because its symptoms are at first little apparent and do not excite attention, until the disease has gone so far as to give rise to the phenomena above enumerated. As the disease advances, it tends in a manner more or less decided to hydrothorax, or pneumonia, or to these two affections simultaneously. When there is dropsy and the collection is considerable, the lung of the diseased side is compressed, and reduced to a small volume, no longer giving passage to the blood; there is a dull sound and dyspnœa, but the patient retains his appetite, and there is little fever. If, on the contrary, there is pneumonia, beside the dull sound there is fever and redness of the cheeks. If one lung alone is compressed by the serous or purulent collection, the other acquires an exaltation of energy, which disposes it to inflammation, on account of the great quantity of blood which it is obliged to receive. The patient experiences uneasiness and even pain of this side, while the side really affected is often in-

sensible. At other times pneumonia supervenes in the side which had remained sound, and this case is almost always fatal. In some patients the acute phlegmasia grafts itself on the chronic, and then woe to the patient, if the dull sound existed before this new accident. In others there is dropsy of the chest well characterized; this dropsy may become general; we have then bloated face and eyelids, infiltration of the feet, of the legs, and often of the whole cellular tissue. Sometimes the lower part of the affected side suffers pain, produced by the compression of the brachial plexus. Gastritis very often supervenes, especially when the pleurisy has existed for a long time. There may, likewise, often exist a complication of hypertrophy of the heart.

Causes.

Chronic pleurisy often commences with the acute; the latter ought in this case to be considered as the cause of the former; but the pleurisy may likewise commence in an occult manner, and it should then be considered as chronic from the beginning; for the degree of irritation, and not the duration, constitutes the real character. Wandering, rheumatic, and arthritic pains, or rather the irritation which produces them, fix themselves sometimes upon the lungs, and give rise at one time to an acute, at another to a chronic pleurisy. Falls and blows upon the chest often leave a slight pain, which finally determines a phlegmasia of the pleura. Attacks of intermittent fever leave sometimes a point of irritation in the pleura, which often disappears, but which sometimes remains and brings on chronic pleurisy.

Prognosis.

When there is induration of the lung, or hepatization, the evil is greater than when there is simple compression,

produced by effusion; for in the last case absorption may occur and the lung insensibly return to its primitive condition, retaining, however, a certain degree of atrophy. Most frequently, however, the patient falls a victim either to the pneumonia which supervenes on the pleurisy, or to the gastritis, or to compression of the lungs, the heart, or the great vessels. When the dull sound has but little extent, the patient may yet exist a great number of years; sometimes the inflammation terminates in the adhesion of the pulmonary to the costal pleura, and the patient may be regarded as cured, with the exception of a slight embarrassment of the respiration: this termination, however, is extremely rare.

Treatment.

It is easier to prevent than to cure chronic pleurisy; it is therefore of the greatest importance to arrest in good time the acute stage, to prevent such a termination. The therapeutic means may, however, be crowned with success when the disease is not of very old standing, when the dull sound is of little extent, when there is no fever, no circumscribed redness of the cheeks; for in this case the dull sound is owing to a collection of matter, the absorption of which is not impossible. Absolute rest, a light milk diet, and abstinence from every kind of exciting drink, must be rigorously enjoined; but it is upon revulsives that we must depend as the most efficacious means, when there remains any hope of cure. We shall then determine an absorption or a revulsion, particularly in young subjects, by the employment of blisters, of the moxa, of setons placed upon the part where the dull sound exists, and not always upon the seat of pain; for it may happen that the sound lung may be the more painful, for this reason alone, that it receives in excess the blood which cannot easily traverse the lung compressed by the serous or purulent

collection. In this case, the application of a blister upon the sound and painful side, would only have the effect of developing the tendency to inflammation and of accelerating the fatal event. It is then essential to recognise this state perfectly, to avoid the commission of such an error in the treatment. When the pus has a tendency to open its way externally, we practice the operation of empyema; but this operation is contra-indicated if pneumonia exists simultaneously with pleurisy, if the lung be tuberculous or hepatized, a state which we recognise by the existence of fever with exacerbations, a circumscribed redness of the cheeks, &c.; it is likewise contra-indicated when there is dropsy, hypertrophy of the heart, and a violet colour of the lips. The only case in which experience has demonstrated the advantage of operating, is that in which the dull sound is very circumscribed.

We shall likewise endeavour to arrest the infiltration which makes its appearance in the eyelids, in the feet, &c.; for this purpose we shall add to the means pointed out, the diuretics, such as the nitrate of potash, the juniper berry, squills, the mild purgatives; but we must always pay attention to the state of the digestive organs.

If the acute stage supervenes upon the chronic, we employ antiphlogistics as in acute pleurisy.

The complications of gastritis exact precautions in the use of aliments and of all the internal medicines.

Pneumonia, to which pleurisy leads but too often, aggravates the disease, but does not require a particular treatment.

If there be hypertrophy of the heart, it must be treated by leeches, absolute rest, diet more or less severe, and by digitalis, if there be no gastritis.

CHRONIC PERICARDITIS.

This affection is more rare than pleurisy; it exists with or without an effusion; in the latter case it is called "dry." Sometimes we find after death the pericardium glued to the heart; we likewise find it sometimes thickened, lardaceous; we meet with an albuminous secretion in its cavity. These are so many products of irritation.

Symptoms.

Permanent pain in the region of the heart; dyspnœa; sometimes a dry cough; pulse small; accelerated; palpitation produced by the slightest exercise; suffocation; pusillanimity; fear of death; dull sound over the region of the heart, if an effusion has taken place; in this case there is also fluctuation produced by the displacement of the liquid.

Causes.

The most ordinary are cold; the moral affections; a preceding acute affection; wandering rheumatic affections; external violence.

Prognosis.

It is more serious when there is a dull sound and fluctuation, and when symptoms of dropsy supervene, swelling of the feet, and bloated visage, &c. than when it is dry. The patient may die immediately, or perish in marasmus, after many months, or even years of suffering.

Treatment.

It is exactly the same as that of chronic pleurisy. Absolute rest must be enforced.

CHRONIC PNEUMONIA.

Phthisis Pulmonalis.

After having treated of pulmonary catarrh, and of pleurisy, both acute and chronic, we are in a better condition to comprehend chronic pneumonia. We have seen that irritation of the bronchial mucous membrane, and of the pleura often extends to the areolar tissue of the lungs; we have seen also that acute pneumonia may pass into the chronic state like all other inflammations. The knowledge of these diverse phlegmasiæ is then a great step towards an acquaintance with the disease we have just entered upon. Whatever may have been the commencement of this malady, dissection constantly presents numerous traces of disorganization, tubercles, granulations, cavities, abscesses, melanosis, hepatization, encephaloid masses, sometimes a destruction, almost complete, of the lung by suppuration.

Authors have never well understood chronic pneumonia, if we are to judge by the theories which they give, and the numerous classifications they establish. In this affection they beheld a specific malady, which they called phthisis, and of which they had many forms, without any other foundation than the predominance of particular symptoms, or the organic lesions found after death. Thus there were tuberculous, rheumatic, catarrhal, ulcerated, melanoïd, granulated, &c. phthisis. But the physiological physician, who knows that these diverse kinds of disorganization are constantly the product of irritation; that this determines sometimes tubercles, sometimes melanosis, sometimes hepatization, &c. according to the constitution of the individual; the precise seat of irritation; its intensity, &c. &c. will guard against taking the effect for the cause, and entertaining the belief of a specific disease. Whether it advances rapidly towards disorganization, or

whether it passes through its stages slowly, and in a manner almost imperceptible; whatever may be the form it assumes, its nature is always identical; it is an irritation, a phlegmasia of the pulmonary tissue. The name of chronic pneumonia is therefore preferable to pulmonary phthisis, because it better expresses the character of the disease.

Chronic pneumonia may present itself under forms extremely different, which may render the diagnosis difficult; but as they give rise to certain symptoms which are always met with, and which are, so to speak, pathognomonic, we shall never be led into error.

There is primitive and consecutive chronic pneumonia. The first is that which has been preceded by neither catarrh, pleurisy, nor acute pneumonia; the second is that which has been preceded by the acute stage, but it is seldom that chronic pneumonia comes on, unless there has previously existed a slight cough occasionally, or a pulmonary catarrh, to which no attention has been given. Insensibly this irritation of the bronchia gains the lungs, gives rise to the formation of tubercles, and it is then said that these tubercles exist without previous irritation, and that the phthisis is an essential disease. As it would be tedious and useless to describe here the numerous forms of chronic pneumonia, we shall confine ourselves to the most common, as giving the type by which we may recognise all other cases. We shall speak of primitive pneumonia, called essential phthisis, and of chronic pneumonia succeeding an acute phlegmasia.

*Symptoms of Primitive Chronic Pneumonia, called
Essential Phthisis.*

It is preceded by a greater or less number of the symptoms which we are about to enumerate: slight fever, augmented by the least exercise; burning heat; dryness of the

palms, particularly towards the decline of day; humidity of the eyes after sleep; abundant urine; circumscribed redness of the cheeks; hoarseness; slight or intense pain in the back; in the chest; sometimes a point in one or both sides is affected with a dull or a lancinating pain; headache; frequent fainting; lassitude or general inaptitude for exercise or motion. In a short time supervene symptoms that leave no doubt as to the nature of the malady; these are a slight irritation of the larynx; cough more or less violent; hoarseness of the voice; a feeling of weight and of constriction in the chest, particularly after motion; sometimes hæmoptysis; difficult decubitus on one of the sides; respiration short, accelerated, accompanied with a sense of suffocation after walking or ascending stairs; the cough increases towards the decline of day; during the night it is rending and followed with mucous and purulent expectoration. These signs are accompanied by wandering pains in the cavity of the thorax, and with considerable lassitude. The temper of the patient becomes peevish, the appetite diminishes more and more, and it is not uncommon for vomiting to occur after eating; the body becomes considerably emaciated; the expectoration becomes more abundant, and the matter expectorated is purulent, yellowish, greenish, sometimes mixed with bloody striæ. Hectic fever supervenes with exacerbation in the evening, in the following manner: ordinarily there is a sensation of languor and chilliness before the febrile exacerbation, which increases during some hours; the pulse is much accelerated, the skin is burning, the cough is dry and frequent; this febrile heat is succeeded by profuse night sweats; the urine deposits a lateritious sediment, and the symptoms then diminish in intensity. Percussion gives a dull sound over an extent more or less considerable; the cylinder no longer transmits the murmur of respiration over the points where the sound is dull, be-

cause the lung being tuberculous, hepatized, affected with abscess, has become impermeable to the air; the tongue and the whole mucous membrane of the mouth are red, or covered with aphthæ; a cadaverous paleness overspreads the whole visage, with the exception of a very circumscribed spot on the cheeks. As the disease proceeds towards its termination, the emaciation becomes frightful, the eyes assume a pearly lustre; a colliquative diarrhœa supervenes, which indicates that the irritation has gained not only the stomach, but also the colon; sometimes there is œdema of the feet, a falling of the hair, the nails become curved, every effort of coughing menaces suffocation, and finally death terminates the painful scene.

In this nomenclature, the symptoms really pathognomonic are pains in the chest, the circumscribed redness of the cheeks, the hectic fever, the dull sound, the absence of respiration in the affected points as discovered by the cylinder; the cough and the nature of the expectoration. In some more obscure shades of the disease, we only find a simple cough, little or no fever, the complexion is sallow, but the patient emaciates and wastes away; there is in this case almost always lesion of the digestive organs. To discover the pulmonary affection, we must use percussion with much care, and employ the cylinder. Our examination discovers a dull sound, we do not hear the passage of the air, the corresponding ribs have no motion; we can then pronounce that pneumonia exists although there may be no purulent sputa, no fever, no hectic flush, no other sympathetic signs: but these symptoms soon supervene in the course of the disease.

Symptoms of Chronic Pneumonia, Consecutive to the Acute State.

In the greatest number of cases chronic pneumonia has been preceded either by acute catarrh, acute pleurisy, or

acute pneumonia. We may say that these three kinds of irritation lead almost constantly to chronic pneumonia, when they are prolonged for any considerable time. These commemorative symptoms render then the diagnosis of this disease very easy. We are assured that the irritation of the bronchia, or pleura has invaded the lungs, or that the acute pneumonia has become chronic, when the pains persist, or manifest themselves in the chest, when there is circumscribed redness of the cheeks, a small continued fever, (hectic,) a dull sound and absence of respiration to a greater or less extent, indicated by the cylinder, immobility and depression of the ribs over the affected part, cough, with purulent expectoration. When catarrh has preceded chronic pneumonia, it is the upper part of the lung which is first affected: when it succeeds a pleurisy, it is the part corresponding to the pleuritic point. These signs, which we may call infallible, are accompanied with the same sympathetic symptoms as those which manifest themselves in the course of primitive chronic pneumonia in an advanced stage. When disorganization has taken place, when there are tubercles, hepatization, cavities, suppuration, &c. the symptoms are absolutely the same, and confound themselves completely, no matter what may have been the commencement of the disease.

In the course of pneumonia, it is not uncommon to observe the appearance of different cutaneous affections, such as erysipelas, furuncles, miliary eruptions, fistula in ano, &c. but these eruptions do not arrest the progress of the disease, when disorganization has commenced.

Gastritis and gastro-enteritis almost always supervene on chronic pneumonia, when the disorganization is far advanced; there is then loathing of food, or an increased appetite, and all the symptoms of gastritis attended always with pains of the stomach after a repast; there is, likewise, constipation, but the irritation of the intestines tra-

vels at a more advanced stage to the colon, producing diarrhoea, followed in a short time by death.

Chronic pneumonia may be exasperated by different causes, particularly by cold; it may assume the acute form and rapidly carry off the patient, or become chronic and acute alternately for a succession of times.

Between these two well-marked shades of chronic pneumonia, there exist many others more or less obscure, but which may easily be recognised by comparing them with the descriptions we have just given.

Causes.

Consecutive chronic pneumonia recognises for its cause the acute phlegmasia which has preceded it. Primitive chronic pneumonia, the essential phthisis of authors, may be determined by all the irritating and stimulating causes which act upon the lungs. But whatever may be said, phthisis never comes on *ex abrupto*, and if we pay close attention to the subject, we shall always find that it has been preceded by catarrh, more or less slight, appearing and disappearing at intervals, by cough, by complaints of the throat, by slight pains in the back, &c. but as no attention is paid to these symptoms, when they are slight, it is said that tubercles, that granulations, or miliary tubercles existed in the lung before inflammation, and that the latter is a result of these organic alterations, and that phthisis is consequently a malady, *sui generis*, which can neither be foreseen nor arrested in its progress. Happily this discouraging theory is erroneous; organic alterations, of whatever kind they may be, are always the effect of an irritation which has preceded them; but tubercles, granulations, pus, &c. once formed, become so many foreign bodies, which irritate the neighbouring parts, augment the irritation which has given rise to them, and hurry on the disorganizing process. Let it suffice to

notice this as a fact, as the limits of this work do not permit us to enter into a detail of the numerous proofs which render it incontestible.

Besides the occasional causes of chronic pneumonia, which are all the agents which excite, stimulate, or irritate the organs of respiration, and consequently the same as those of acute pneumonia, there are predisposing causes. Predisposition consists in a peculiar irritability of the lung, which renders it more sensible to the impression of irritating agents, and, consequently, more apt to contract irritation. There is no age, no sex, no temperament which may not be affected with pneumonia; but experience has demonstrated that the predisposition, the peculiar irritability of which we speak, is most frequently found among individuals who have the constitution which has been named phthisical, the characters of which are the following: narrow chest, long and small neck, slender limbs, a tall thin stature, delicate skin, circumscribed redness of the cheeks, the lymphatico-sanguine temperament. The scrofulous constitution, likewise, gives a predisposition to tubercles, and, consequently, to chronic pneumonia. As the organic structure transmits a hereditary character, it results that, in the same family we may often encounter the same irritation derived from this cause, or, which is the same thing, we meet with a predisposition to the same maladies. It does not, however, follow that these individuals are irrevocably condemned to contract the diseases of their parents; but to secure an exemption from them, they must avoid the influence of the occasional causes more carefully than individuals not predisposed. Unhappily the predisposition, or, to speak with more accuracy, the irritability may be such that even the influence of the agents necessary to life may determine inflammation. Singing, declamation, residence in a cold climate, &c. may not injure a chest which has

but little irritability, whilst the same causes prove destructive to lungs eminently irritable, such as are possessed by persons of the phthisical habit of body.

We have said that gastro-enteritis develops itself often during the course of pneumonia, but it is not uncommon also for the gastritis to exist antecedently to the pulmonary affection; it should then be regarded as the cause of chronic pneumonia. It is essential to keep in view that these two irritations are often concomitant from the commencement to the termination of the disease.

Prognosis.

It is very unfavourable when the dull sound, and consequently disorganization extends over a large part of the lungs. In other respects we can judge of the intensity of the disease by the violence of the hectic fever; by the nature of the sputa; the violence and perseverance of the cough; and the emaciation always progressive of the patient.

Treatment.

This is emphatically the place for the application of the maxim, '*principiis obsta.*' The essential point is to arrest the inflammation, as this is the only means of preventing disorganization.

Chronic pneumonia being generally the result of catarrh, of pleurisy, or of acute pneumonia, care should be taken to dissipate in proper time these inflammations, in treating them appropriately by the means pointed out. (See these articles.)

As primitive chronic pneumonia comes on in a manner more insidious, it is important to be on our guard at a seasonable period against those little rheums, those slight temporary coughs, which announce the commencement of irritation, and which would not degenerate so often into

chronic pneumonia, even among the predisposed, if there was less carelessness about opposing them by a proper treatment. In the treatment, the removal of the occasional causes should be considered of the first importance; thus subjects of a phthisical habit, those who have great pulmonary irritability, should make up their minds to practice self-denial in a great many things. They should avoid the vicissitudes of heat and cold, singing, hollowing, declamation, stimulating food and drink, &c. Beside this, if these individuals have a cough; a catarrh, however slight; pains in the back; behind the sternum, no matter how well they may be in other respects; they must be put upon a severe diet; and these irritations must be attacked from time to time by small general and topical bleedings, whilst they have sufficient strength to endure them. These same means are applicable to those who have just had an attack of hæmoptysis, and who still retain heat; a circumscribed redness of the cheeks, and a cough with the '*râle muqueux*' in the chest. In all cases, before the fever is continued, and before the dull sound exists, we must commence with a general bleeding, apply leeches, sometimes repeatedly, immediately over the point of inflammation; afterwards emollient cataplasms; a mild diet, of milk, if the stomach supports it well; if not, we give water gruel, pap, three or four ounces of broth, two or three times a day; the inflammation having been entirely dissipated by these means, we must prevent its return. Here also the only means consist in the removal of all the occasional causes; if there is a tendency to relapse, we must resort to the employment of the revulsives, which consist of moxa, setons, blisters, or epispastic ointment; we continue the emollient regimen with perseverance; avoid the impression of cold during the winter, and all exposure to its influence when there is moisture

of the skin. The patient must live in an artificial atmosphere during the bad season.

Should the dull sound and continued fever supervene, or persist, notwithstanding the employment of these means, we must renounce bleeding, and if the patient has appetite, allow him a more liberal diet, for if we persevere many months in bleeding, and in the use of too severe a diet, the debility would become too great, and the strength of the patient be exhausted. But moderation must be observed in the quantity and quality of the food; if too much is taken, and if it be too exciting, we immediately observe an aggravation of all the symptoms, and particularly of the fever.

If the revulsives placed upon the chest occasion cough, and cause the loss of sleep, we dress them with emollient applications.

When the disease is far advanced, the cough violent, and the expectoration very abundant, to such a degree as to prevent the patient's sleeping, the repast of the evening must be omitted, and a mucilaginous draught, with the addition of opium, of laudanum, or of the acetate of morphia, be administered.

If the stomach is sound, the Iceland moss may be given in the form of jelly, or in infusion, and even small doses of the sulphate of quinine; but these medicines must be laid aside on the slightest appearance of gastric irritation.

When profuse sweats exhaust the patient, it has been proposed to moderate the secretion by the internal use of the acetate of lead in progressive doses, from six to twelve grains, during the twenty-four hours. Some have even gone so far as to propose this medicine as a means of cure in chronic pneumonia; if they can cite examples of its successful employment, it has been when there existed only chronic catarrh, which has been mistaken for pneumonia. In the cases in which there are tubercles, hepa-

tization, &c. what can be expected from these, or indeed from any other remedies?

What shall we say of tartar emetic, so much vaunted by some, and so much decried by others? In the beginning of the disease, when as yet there is no disorganization, it appears to be nearly demonstrated that tartar emetic may diminish the inflammatory state by retarding the circulation of the blood, and in consequence, delay or prevent the disorganization, which is the result of it: but these two conditions are necessary—there must be a complete absence of gastric irritation; and the tartar emetic must be given in very small doses; for example, one, or at most two grains may be taken in an appropriate vehicle in the course of the day, in several doses, in such a manner as not to provoke vomiting. If there is a tendency to hypertrophy of the heart, the digitalis may be advantageously conjoined with this medicine. We discontinue the use of them on the least appearance of the symptoms of gastritis. As to the internal use of tartar emetic in high doses, in doses that might be called frightful, as we have seen it administered in our days, reason had already pronounced upon it before experience had demonstrated the danger of the practice; I do not hesitate to say that in many cases the deaths which have followed its use should be regarded as the result of a real poisoning.

When it has reached a very advanced stage, it is a disease beyond the reach of the resources of art, and admits only of palliative treatment.

ACUTE AND CHRONIC CUTANEOUS PHLEGMASIÆ.

EXANTHEMATA.

The skin is often the seat of diverse phlegmasiæ, both acute and chronic, the form of which is extremely varia-

ble. Inflammation may be circumscribed and partial, or occupy the whole extent of the skin. It may confine itself to the surface, or it may affect its whole thickness, and even the subjacent cellular tissue, putting on the phlegmonous character. Sometimes its march is very irregular, at other times it pursues a definite course, appearing always in a determined form, and disappearing to return no more: such are variola, rubeola, &c. There are cutaneous inflammations which have a gangrenous character from the commencement; in other cases gangrene does not manifest itself until the inflammation has gradually reached the highest point of intensity.

The cutaneous phlegmasiæ exercise the greatest influence over the actions of the viscera, and principally over those of the mucous membranes, and *vice versa*, on account of the close sympathy which connects these parts of the body with each other. One class of these diseases awakes principally the action of the mucous membrane of the digestive canal, they occasion the irritation of this membrane, or are preceded by it. Another class has more relation to the mucous membrane of the air passages, with that of the nose, the eyes, &c.

Although every phlegmasia of the skin may assume the acute or chronic form, there are certain varieties which seem particularly to affect the chronic character; such are most frequently tetter, tinea, leprosy, &c. Irritation of the skin must necessarily deprave its action. There is first an afflux of blood and of other fluids towards the irritated point; if the inflammation is intense, there may be supuration. At a less violent degree, either because the inflammation is fixed for a long time on the same tissues, or because the irritation occupies particularly the excretory or secretory canals, the nature of the secretions is vitiated in such a manner that there exudes from the skin a matter which is greasy, oily, ceruminous, gummy, scurfy, scaly,

or furfuraceous, &c. All these products are the results of irritation; the difference of their forms depends on the intimate structure of the tissues in which they have their seats, or on the circumstance of the irritation predominating in certain systems of this tissue, or it depends on the intensity of the irritation, or finally on the constitution of the individual. But this variety of forms is not opposed to the identity of the nature of the irritation: in whatever manner it is contemplated, it can never be any thing but an exaltation of vital activity, of which the effects must necessarily differ, in consequence of the reasons we have mentioned above.

FURUNCLE AND ANTHRAX.

A circumscribed phlegmonous inflammation of the skin, and of the subjacent cellular tissue.

Symptoms.

Pruriency, circumscribed renitent redness, pungent pain; then follows the eruption of a little red pimple, accompanied with pungent heat. This is the commencement of furuncle. This pimple soon becomes a tumour, which takes the name of furuncle when it is not very considerable, and when it rises to a point; it assumes the name of anthrax when it is of greater extent. The summit of this tumour generally presents one or more grayish or blackish points. The inflammation is sometimes sufficiently violent to give rise to fever. At the end of a few days suppuration is established, and we perceive in the middle of the inflamed part a whitish mass, which is called the *core*, and which is nothing else than disorganized cellular membrane. In anthrax there may be several of these points of disorganized cellular membrane, each of which has a particular aperture. Sometimes the intervals

which separate these points become gangrenous, and there results a loss of substance more or less considerable.

Causes.

Every thing that causes irritation of the skin; a particular disposition to contract these inflammations. This disposition is sometimes such, that we see furuncles reappearing upon different points, during months, and even years; this happens particularly under the influence of great heat or humidity.

These inflammations are not unfrequently real metastasis or transfers of internal irritation to the periphery of the body; in this case the internal inflammation is the true cause of the external, and this critical eruption may prove advantageous.

Prognosis.

It is in general by no means unfavourable.

Treatment.

We may completely arrest the development of this inflammation by making at the commencement a longitudinal or crucial incision. If the patient is afraid to submit to this operation, we must be content to cover the part with the *onguent de la mere*,* or with diachylon. If it is very large, after having applied the plaster, we should cover it over with an emollient cataplasm. When the core is formed, we should hasten its discharge by using a suitable degree of pressure. When furuncles reproduce themselves, we must destroy them by cauterizing them immediately on their appearance, with the nitrate of silver. Emollient drinks must be used if there be fever; no pur-

* A plaster composed principally of litharge, suet, olive oil, wax, and black pitch.

gatives or emetics are to be administered under pretext of evacuating the humours.

CARBUNCLE, OR PUSTULA MALIGNA.

Carbuncle and the pustula maligna are a sort of furuncle which terminates rapidly in gangrene, and which is often accompanied with an internal phlegmasia.

Symptoms.

Pain, pruriency, a spot at first red, afterwards black, which is soon surmounted by a vesicle encircled by an œdematous swelling. The vesicle becomes blackish; the limb is affected with convulsive movements; this constitutes pustula maligna. The phenomena which accompany the carbuncle are nearly the same; but generally there is no vesicle, and the part surrounded by a certain shining redness, is less regular than in the malignant pustule. The inflammation promptly disorganizes the subjacent tissues. If the patient does not succumb, the eschar detaches itself, and there results a loss of substance, which sometimes extends even to the bone. In the greater number of cases there supervene grave symptoms; to the whole of these symptoms grouped together, authors give the name of putrid fever; it is a real gastro-enteritis which has arrived at the state of adynamy, or ataxy, and which, in a short time carries off the patient, if he is not very promptly relieved.

Causes.

This affection is contagious. Although it may develop itself spontaneously, yet in the greater number of cases it is produced by contact with different parts of animals that are suffering from carbuncle, or have died of it; thus the persons most liable to contract it are veterinary surgeons, butchers, graziers, tanners, carders of hair for mattresses.

Treatment.

Antiphlogistics and tonics, used internally and externally, have been lauded in their turn; but experience is not in favour of these modes of treatment; and after all the trials that have been made, we are obliged to confine ourselves to the following plan. Scarifications more or less profound, the application of caustics to the tumour to limit its extent; some physicians extirpate the entire mass with the bistoury. As to the internal treatment, it must be as in gastro-enteritis, proportioning the means to the intensity of the symptoms. (See gastro-enteritis and its different forms.) Many examples are cited of cures produced by the decoction of oak bark, and we are assured that, applied externally, this substance arrests the progress of gangrene and puts an end to all the danger in the course of two or three days. The bark of a particular species of oak has been made use of, but it does not appear that it acts differently from the other astringent barks, the properties of which are owing to the tannin which they contain.

PARONYCHIA.

Symptoms.

This is an inflammatory tumour, which developes itself at the ends of the fingers or at the roots of the nails; at first it is hard and attended with little pain, it afterwards becomes red, causes a very acute throbbing pain, and terminates in suppuration. Although the nature of paronychia is always identical, it has been divided into several species, according as it has its seat immediately under the epidermis; in the subcutaneous cellular tissue; in the sheaths of the flexor tendons of the fingers; in the periosteum, and even in the osseous system. This inflammation,

according as it affects the mass of these tissues, and according to the depth of the seat which it occupies, and its intensity, may determine swelling of the arm and of the axillary glands, violent pains in these parts, intense fever, and even death. The latter termination, however, is rare.

Treatment.

If the paronychia is slight, if for example, it is of the first species, having its seat immediately under the epidermis, we may cure it by immersing the finger in cold water for a sufficient length of time to prevent reaction, or even by cauterizing it in the commencement with nitrate of silver. But if the inflammation be intense, and especially if it be deep, we shall almost always succeed in dissipating it by repeatedly covering the finger with leeches, a means much less painful than laying it open, to which, however, we must resort, if local bleeding be ineffectual. The employment of plasters and ointments only serves to waste time and to give the inflammation an opportunity of producing disorganizations, which may necessitate the amputation of the finger.

A mild and light regimen, emollient drinks, abstinence from stimulants.

ERYSIPELAS, ERYTHEMA, ZONA.

This is a partial phlegmasia of the skin, of greater or less extent, sometimes affecting only its surface, at other times interesting its whole thickness, and even the subcutaneous cellular tissue.

Symptoms.

Erysipelas.—A bright red colour of the skin preceded by all the symptoms of gastritis, as general uneasiness, lassitude, pyrexia, &c.; the second or the third day a slight

tumefaction of the skin, unevenly circumscribed, with redness disappearing under the pressure of the fingers, burning heat and pain, affecting most frequently the face, sometimes the limbs, and more rarely the other parts of the body. Unequal in its forms, erysipelas sometimes occupies the whole face, sometimes it spreads successively over different parts, producing often complete occlusion of the eyes, a fever more or less ardent, and proportioned to the intensity of the inflammation.

At the end of six or seven days there is an eruption of serous pustules, and then follows desquamation between the ninth and twelfth day. This inflammation may likewise terminate by resolution, by delitescence, by metastasis, by gangrene or ulceration of the part, and by death. Erysipelas is ambulatory or fixed, continued or periodical.

Erythema.—We give particularly the name of erythema to an inflammation of the same nature and of the same form as the preceding, when it is produced by an external cause. It only differs on account of its having less intensity, and being, in consequence, rarely accompanied with fever.

Zona.—This is a prurient pustular erysipelas, in form of a girdle or of a half girdle, generally occupying the inferior part of the thorax, or the upper part of the abdomen, and sometimes, but rarely, the neck or the limbs. It may or it may not be attended with febrile symptoms, according to its degree of intensity. It may exist in a periodical form.

Erysipelas has been distinguished into erysipelas from an internal and from an external cause, and also into phlegmonous and œdematous erysipelas. These divisions need not be explained.

Causes.

Acrid, irritating applications to the skin, stings, fric-

tion, insolation, heat, cold, the predominance of the sanguineous capillary system, the suppression of an habitual evacuation, strong moral affections. Erysipelas very often depends on internal causes. The most frequent of these causes is a gastric irritation. The appearance of the exanthematous eruption sometimes causes the disappearance of the internal irritation; but sometimes the cutaneous irritation is superadded, and the danger is augmented. There is no such disease as bilious erysipelas, but there may exist at the same time a superabundance of the biliary secretion, occasioned by the gastritis.

We must rank among the internal causes of erysipelas, the use of certain aliments, and the ingestion of certain poisons, which at first produce irritation of the digestive tube, and afterwards a cutaneous eruption or an erysipelas.

Prognosis.

Violent fever, accompanied by coma or constant delirium, is a bad omen. Where this is not the case, the termination is happy.

Treatment.

If the erysipelas is slight, and depends upon an external cause, without fever, local bleeding around the inflamed part, and never upon the part itself; emollient and refrigerant topical applications. The application of astringent substances conjoined with narcotics are then very useful. If the irritation is intense, emollient fomentations and a mild unirritating regimen. If the patient is plethoric, general blood-letting, and severe diet, even should the erysipelas be but slight. If the irritation has been preceded by internal irritation, the same treatment must be used; all internal stimulants should be proscribed; demulcent drinks are to be administered. If it is accompanied with

gastric irritation, or with a secretion of bile, no emetics are to be employed, but the treatment of gastritis, with more or less energy, according to the violence of the symptoms, is to be superadded to that of erysipelas. If there is prostration of strength, smallness of the pulse, it is no longer proper to bleed; nevertheless, we must not administer bark, musk, or other pretended tonics. In phlegmonous erysipelas, after this treatment, we make incisions to evacuate the pus. When pustules supervene, we puncture them and apply emollients.

N. B. Some practitioners are in the habit of applying a large blister over a severe erysipelatous inflammation in its commencement, for the sake of dissipating it; this practice is often crowned with success; but the particular irritability of the individual should be taken into consideration by the physician, for there are some, in whom the addition of this artificial irritation may react upon the viscera, and aggravate the symptoms. The employment of general and local depletion, more or less copious, and more or less frequently repeated, according to the circumstances of the case, the antiphlogistic diet, regimen, and drinks will, in every case, constitute the treatment which is most rational and least hazardous.

SCARLATINA, OR SCARLET FEVER.

This affection has for its principal characteristic an eruption of irregular spots on the skin, accompanied with an irritation of the mucous membrane of the digestive canal, and still more frequently of the air passages.

Symptoms.

They vary according to the complications, and the intensity of the irritation. If the scarlatina is mild, after three or four days of fever, the face swells; at the same

time red points make their appearance upon the skin, at first scattered, but in a short time close together. About eight days after the eruption, there is a desquamation, often followed by a general tumefaction, resembling anasarca, but generally disappearing in a short time. If the irritation be violent, its course is as follows:—There is first general uneasiness; rigors; heat; head-ache; sore throat; coryza, sometimes of considerable intensity; the tongue is red on its borders. The second day deglutition becomes difficult; there is swelling of the tonsils; nausea, and even vomiting; the breath is hot; respiration hurried, and interrupted by sighs; the skin burning and dry; anxiety; hurried circulation. Such are the precursory symptoms to which the name of the fever of incubation has been given: this fever is only the sign of a gastric irritation, accompanied most frequently with an angina. This irritation is sometimes of a nature sufficiently intense to develope cerebral symptoms of a very grave nature, and sometimes even rises to a state of adynamy and ataxy; this is the scarlatina maligna of authors. It may invade the lung or the pleura, and be attended with all the dangers resulting from the inflammation of these parts.

Towards the third or fourth day, swelling and redness of the whole skin, resembling a vast erysipelas, disappearing under pressure, but reappearing very promptly; sometimes, but not constantly, an eruption of spots of a scarlet colour, sometimes livid, on the face, the neck, the chest, and afterwards over the whole body. General œdema, affecting particularly the lower extremities. Desquamation three or four days after the eruption. Scarlatina is very often followed by anasarca; at other times it leaves a catarrh, a pleurisy, or a pneumonia. These results are most apt to occur when the inflammation has not been attacked vigorously.

Causes.

This complaint selects children and youth particularly, as the objects of its attacks, and prevails especially in the end of autumn. However, no age is exempt, and it may occur in all seasons. It sometimes reigns epidemically; it appears to be capable of communication by contact, and by inoculation. In general it attacks the same individual but once.

Prognosis.

Symptoms of adynamy and of ataxy are very ominous. The patient may die of suffocation from the swelling of the tonsils; the mucous membrane of the larynx may be attacked by gangrene; gastritis, pleurisy, or pneumonia, when they exist, occasion danger in proportion to the intensity of these inflammations. Most frequently the disease is cured.

Treatment.

The same as that of measles. (See Measles.)

MEASLES,

Like scarlatina and variola, is preceded by symptoms to which authors give the name of the *fever of incubation*, and which, in the view of the physiologist, are those of an irritation of the mucous membrane of the alimentary canal, of the pulmonary passages, and sometimes of the encephalon. General uneasiness, contusive pains of the limbs, alternations of heat and chilliness, nausea, sometimes vomiting and diarrhœa, most frequently a dry cough from the commencement, hoarseness, dyspnœa, somnolence, wild dreams, sneezing, coryza, swelling of the eyelids, and the eyes, a continual flow of hot acrid tears,

soreness of the throat more or less violent, sometimes irritation of the whole respiratory apparatus, and in that case, heat, oppression, and pain in the thoracic region, insupportable itchiness of the face; towards the fourth day, sometimes sooner, rarely later, an eruption, at first on the face, afterwards on the neck, on the chest, and insensibly over the whole skin, of little red spots, slightly elevated, somewhat like the bites of a flea, and generally grouped in irregular patches. The interstices between these patches are not of a deep red colour, as in scarlatina, a circumstance which may serve to distinguish this disease from the measles. The form of the pustules equally prevents its being confounded with variola. The eruption is generally completed in from thirty-six to forty-eight hours. The symptoms mentioned above, with the exception of vomiting, subside neither on the accession nor on the completion of the eruption; sometimes the fever and the cough grow worse, and occasionally the disease may rise to the form of adynamy, and it then constitutes the *malignant* measles of authors. Desquamation occurs towards the fourth or fifth day after the eruption. There remains yet for a time some fever, cough, and very often a rebellious diarrhœa.

Causes.

It is contagious; although infancy and adolescence are most exposed to it, yet it attacks all ages and all sexes. It often prevails as an epidemic, and particularly during winter and spring.

Prognosis.

When irritation predominates with violence in the digestive canal, or in the air tubes, and the eruption takes place with difficulty, the danger is in proportion to the intensity of this inflammation. The phenomena of adynamy are always ominous. If the visceral inflammation, what-

ever may be the seat of it, is not considerable; especially if the fever diminishes when the eruption makes its appearance, or when it is completed, it is a favourable sign. Measles may be followed by marasmus, by anasarca, and by rebellious diarrhœa, a circumstance which indicates that the inflammation remains fixed upon some viscus, after the measles has disappeared.

Treatment of the Measles, and the Scarlet Fever.

Curative Treatment.—In the beginning, when it is not certain that an eruption is about to make its appearance, the treatment should be decidedly antiphlogistic. This is the only way of preventing the inflammation from rising to a very intense degree, of preventing adynamy, convulsions, suffocating angina, pneumonia, and pleuritis, which are only the effect of this inflammation. Thus, we have recourse to blood-letting over the epigastrium, at the throat, over the chest, and in every place where inflammation appears to predominate. General blood-letting must be employed if there is violent pneumonia, or pleuritis, or encephalitis. We must repeat these means often, and with confidence, as long as the symptoms of inflammation persist, or have a tendency to rise. The patient must be placed in a temperate atmosphere. Severe diet, warm emollient drinks, hot cataplasms to the inferior extremities.

If the eruption occurs with difficulty, it is proper to give sudorifics to throw it upon the skin: if the inflammation of the digestive organs be intense, which may be easily known by the violence of the fever, these drinks would only augment it; we must then confine ourselves rigorously to the administration of the mildest drinks, such as those of mallows, of gum arabic, or sugar-water. But if the inflammation of the stomach is not active, we may give hot drinks made with the flowers of violet, of

mallows, of elder,edulcorated with the syrup of gum arabic. The patient is to be placed in a warm bath, and immediately afterwards in a warm bed, properly covered; we then administer a hot drink, but not stimulating, to excite the action of the skin. Some physicians advise the employment of the cold bath, and to wrap the patient up afterwards in a hot blanket, to provoke vital reaction, but unless this reaction occurs, the irritation is infallibly augmented.

We do not venture to indicate this means but with caution, although it is certainly useful in some cases.

The eruption being completed, if the fever has diminished, we may give chicken water, at a later period thin light pottage, afterwards broth, but if the symptoms do not become milder, we must persevere to the end in the antiphlogistic treatment.

Preventive Treatment.—The prevention of mediate or immediate contact with the diseased. If an epidemic has been developed by local causes, removal from the source of infection.

German physicians prescribe belladonna as a preventive of scarlatina. They administer the extract in the proportion of two grains to an ounce of fluid, of which they give, four times a day, five or six drops to infants, and ten to persons more advanced. We have not had an opportunity to test the efficacy of the medicine in this disease.

VARIOLA, OR SMALL-POX.

Variola is divided, on account of the manner in which the eruption appears, into distinct and confluent, and on account of the gravity of the symptoms, into benign and malignant. But the nature of the disease is always identical. The inflammation may be light or intense, predominate in certain viscera, develop diverse sympathetic

symptoms, in proportion to its intensity, and the irritability of each individual, but all this constitutes only a variety of form. We will then content ourselves with describing the two most prominent forms, from which the others differ only in being of greater or less intensity, viz. distinct or benign small-pox, and confluent or malignant.

Symptoms.

Distinct or Benign Small-Pox.—Uneasiness, lassitude, horripilation, pungent heat of the skin, pyrexia, pain at the epigastrium, rendered more sensible by pressure, pain in the loins, nausea or vomiting, somnolency, sometimes convulsions, especially among infants. Such are the precursory symptoms which constitute the fever of incubation of authors, and which are of the same nature as those of scarlatina and the measles. Towards the third or fourth day, an eruption of small red points, at first little elevated, separated by interstices, more or less considerable, appearing at first upon the face and upon the chest, and successively, but sometimes simultaneously, over the other parts of the body. A diminution of all the febrile symptoms during the eruption, entire apyrexia when it is completed, which happens in the space of four-and-twenty hours. The pustules increase then in volume from day to day, rising to an apex; their points at first whitish, then yellowish, enlarge afterwards, and present a depression; the face and eye-lids are swelled to such a degree that the patient often cannot open his eyes.

Towards the eleventh day, the pustules have attained their maximum of volume; they suppurate, burst and dry, the swelling of the face disappears, and is often replaced by that of the feet and hands. If the eruption is somewhat abundant, there is towards the sixth or the seventh day,

difficulty of deglutition, hoarse voice, ptyalism, and the fever reappears ordinarily from the eighth to the tenth day; but all these symptoms disappear when desquamation occurs.

The Confluent and Malignant Small-Pox of authors.—In this variety the eruption is preceded by violent pyrexia, attended in many cases with frequent vomiting, with convulsions, with coma, delirium, an undefinable uneasiness, sometimes by diarrhœa. The eruption is not so long delayed in general as in distinct small-pox; it occurs most frequently from the second to the third day. The spots are so multiplied and so near each other, that it is difficult to perceive the interstices; on the face they appear to form only a single sore, with an unequal surface. After the eruption, the violence of the symptoms, with the exception of the vomiting, does not abate; almost always it is augmented, there is acute encephalitis, and often inflammation attains the degree of adynamy and ataxy. The whole face swells in a manner so horrible, that it is impossible to recognise a single feature of the patient; deglutition is extremely difficult and painful; there is ptyalism, which in the case of infants is succeeded by diarrhœa. The pustules tend to suppuration, which occurs a little sooner than in the first variety. Most frequently they furnish in place of pus, only a sanious humour, and desquamation does not occur until the twentieth or twenty-seventh day, leaving marks upon the skin more or less deep.

When the disease is very violent, and the eruption occurs with difficulty, we sometimes observe on the skin the appearance of livid marks; the urine is often bloody; a general erysipelas may precede or follow the eruption.

Causes.

This disease is eminently contagious; there is not per-

haps an example well attested of its occurrence twice in the same individual.*

Prognosis.

Distinct small-pox, according to the most exact registers, carries off about a tenth part of those affected with it, while confluent small-pox destroys one-half. A very laborious deglutition, particularly if there be great prostration of strength, cerebral symptoms, petechial spots of the skin, and hæmorrhage of the urinary passages, are signs of violent inflammation, and consequently are very ominous. Even when the disease terminates in health, it often leaves after it deformities, such as scars, blindness, spots on the eyes, lachrymal fistula, deafness, lameness, &c.

Preventive Treatment.—Vaccination; inoculation is at the present day unanimously rejected. It is proved by examples extremely numerous, that individuals vaccinated with success, have been affected afterwards with variola. The reason of this is, that vaccination does not always destroy entirely the disposition to contract the small-pox, and then the disease may make its appearance in a vaccinated person; it is on this account that in certain countries, and particularly in some of the Swiss cantons, it has for many years been the custom to practice a second vaccination in children, three or four years after the first. There has not yet been an example of the small-pox making its appearance in persons who have submitted to these precautions.

Curative Treatment.—Distinct small-pox only re-

* The author here undoubtedly is in error; notwithstanding the obstinate scepticism of some pathologists on this point, the possibility of the occurrence of small-pox twice in the same individual, is established on incontrovertible evidence.—TRANSLATOR.

quires confinement to bed in an airy chamber of a moderate temperature, emollient drinks, warm, and slightly diaphoretic, if the gastric symptoms are light, abstinence, emollient cataplasms to the inferior extremities. If the signs of the inflammation of the digestive canal are violent, leeches to the epigastrium; leeches about the top of the sternum, and at the throat, if the deglutition is sufficiently embarrassed to demand such a measure.

The confluent small-pox demands a most energetic treatment. We might often prevent the symptoms of malignity, of ataxy, of adynamy, if from the very beginning we were impressed with the conviction that we have to treat a violent inflammation, and that the indication is to attack it by a treatment decidedly antiphlogistic in its greatest rigour. Thus having placed the patient in the situation demanded by the distinct variety, we do not hesitate to make use of local depletion, by means of the application of leeches about the points where the inflammation predominates; these points are in general the stomach, the throat, and the brain, as we may be readily convinced by an analysis of the symptoms. These bleedings should be abundant and frequent, but when once complete prostration has occurred, constituting what authors call adynamy or ataxy, leeches become dangerous; we must then renounce bleeding and confine ourselves to the employment of drinks of a cooling nature, but not acid, because the latter provoke cough. If the eruption takes place with difficulty, we should use the precautions which have been pointed out in the treatment of scarlet fever and the measles. The treatment during convalescence is absolutely the same as in the case of gastro-enteritis.

But the violence of the inflammation sometimes triumphs over the best directed efforts; the impotence of our resources, so often proved in confluent small-pox, has induced physicians to oppose it with other means. The ec-

trotic method has latterly been much extolled. This method consists in cauterizing the variolous pustules, (in the confluent variety,) immediately on their appearance. This means arrests their progress, and as the encephalitis, (the most serious symptom of the malady,) is in part the effect of the cutaneous irritation reacting violently on the brain and other viscera, it follows, that in limiting this irritation, we must at the same time arrest the march of the encephalitis; and this in effect takes place. Cauterization is performed in diverse manners. Some simply touch the pustules with nitrate of silver; others commence by opening them with a needle, and cauterize them afterwards. The temporary deformity produced by the cauterization never leaves any traces. In addition to the cauterization we apply fifteen or twenty leeches on each side of the neck, to attack directly the encephalitis; repeating this application during two or three days, according to the intensity of the inflammation. The confluent small-pox, thus combated, present a very small number of unfavourable terminations, which this treatment reduces nearly to the proportions of those occurring in distinct small-pox.

VARICELLA, OR VARIOLA VOLATICA.

After a slight fever, an eruption of distinct pustules, resembling considerably those of variola, but seldom arriving at a state of suppuration. After five or six days, these pustules dry and fall without leaving cicatrices.

Causes.

Little known. It has been regarded as a variety of small-pox, with which it has been confounded; but it is not contagious.

Treatment.

This malady scarcely requires medical care. We are careful not to exasperate the fever, by withdrawing all stimulants; and we add to a light regimen, and even to abstinence, if the inflammatory symptoms assume a little intensity, the employment of emollient drinks, acidulated, &c.

MILIARY FEVER.

Symptoms.

This affection is characterized by the following signs:—Sleeplessness; lassitude; sense of anxiety, and embarrassment in the chest; perspiration of a peculiar odour; itchininess of the skin, afterwards an eruption at a variable period, of little red or white pimples, having considerable resemblance to grains of millet appearing over the whole skin, except that of the face. After one or two days, each pimple forms a little vesicle, filled with a whitish or transparent serosity, which, in a short time runs out. The pimple then dries, and the epidermis which covers it, detaches itself in furfuraceous scales. It is seldom that the eruption is simultaneous over the whole body; most frequently it takes place successively, and we observe pimples rising and disappearing in turns during many days, and even weeks.

Causes.

It appears that the miliary fever is nothing else than a gastro-enteritis, accompanied with a cutaneous eruption, in persons of a lymphatic constitution, in hot, humid, or marshy countries. This disease sometimes supervenes in persons in whom a gastro-enteritis has been exasperated by stimulants, in women in child-bed, during the affection

called milk fever, and who have profuse sweats. This affection is not contagious; there is no miliary typhus, as we might be led to suppose by certain gastro-enterites, elevated to the degree of typhus, and accompanied with a miliary eruption, or with petechial spots.

Prognosis.

The prognosis is the same as that of gastro-enteritis; it is the intensity of the internal irritation to which we must look as giving grounds for our hopes or our fears. The appearance of petechial spots between the miliary points, symptoms of adynamy and ataxy, delirium, and coma, are very unfavourable omens.

Treatment.

The same as that of gastritis, or of gastro-enteritis, or that of women during confinement to child-bed, according to the case and its complications. (See gastro-enteritis.) We must favour the eruption not by the employment of sudorifics or other stimulants, but by the use of watery, emollient, and warm drinks, and by preserving a regulated temperature around the patient.

URTICARIA.

Two days after the ordinary precursory signs of the cutaneous phlegmasiæ, an eruption of prurient points, considerably resembling those produced by the sting of nettles; these points disappear sometimes in the morning to reappear in the evening with fever, *intermittent urticaria*. After the lapse of some days, desquamation under the form of furfuraceous pellicles.

Causes.

This eruption is evidently the result of an irritation of

the digestive passages: it is in fact sometimes produced by the use of certain kinds of food, as muscles, crabs, &c. which irritate the digestive canal; at other times it makes its appearance in the train of a gastritis.

Treatment.

This affection is ordinarily light, and exacts only the employment of emollient drinks, and a light and vegetable diet. If the fever is violent, we should conduct the treatment as in gastro-enteritis. When periodicity exists, after the employment of antiphlogistics, we administer the sulphate of quinine.

PEMPHIGUS.

Pemphigus, which is rather a rare affection, has, for its principal character, the appearance, upon different parts of the body, of vesicles filled with a yellowish fluid, of variable forms and volume. We see them from the size of a freckle to that of the fist. The ordinary concomitant or precursory symptoms of cutaneous eruptions, do not always occur in this disease, so that pemphigus may or may not be attended with fever. At the end of five or six days the vesicles break, and permit the serosity which they contain to ooze out. A scab is then formed, which falls, and sometimes leaves an ulcer difficult to cure, particularly in scorbutic, old, or scrofulous subjects. The appearance of the vesicles is not always simultaneous; it is sometimes *successive*.

Causes.

They are little known. We observe this malady particularly in countries that are marshy and humid, and have an unhealthy atmosphere. It may depend upon an internal phlegmasia, and it is then accompanied with fever,

more or less intense; or it may depend on a cause, the action of which is confined to the skin, and in that case it is without fever. Sometimes this disease assumes the periodical form.

Prognosis.

It is rather unfavourable among persons of a depraved constitution, because there may supervene ulcers difficult to cure. Among individuals endowed with a good constitution, the prognosis is favourable if the vesicles contain a limpid and inodorous serosity. When there are fever and internal phlegmasia, the prognosis is relative to the intensity and the complications of this phlegmasia.

Treatment.

Nearly the same as that of the preceding cutaneous affections: if there is gastritis we have recourse to refrigerant drinks. If the ulcers are benign, we dress them with simple cerate; if they are black, of bad aspect, we make use of stimulating applications, such as the ointment of styrax, the digestive ointment, the solutions of chlorate of chalk, or of soda, &c. If the affection is purely local, we must endeavour to modify the vitality of the skin from the commencement of the eruption, by the application of compresses wet with astringent, alcoholic, camphorated liquids, &c. We employ at the same time sudorifics. We might in the commencement of the eruption try the *ectrotic* method to dispel the eruption, as is practised in variola. If there is periodicity, we must administer the sulphate of quinine with the treatment pointed out. (See Intermittent Irritations.)

CHRONIC PHLEGMASIÆ AND SUB-INFLAMMATIONS OF THE SKIN.

The almost infinite variety of forms which are assumed by chronic affections of the skin, does not prove an equal variety in the nature of these affections. Pimples, vesicles, scabs, thickening of the skin, induration of the cellular tissue, the enlargement of the bulbs of the hair, &c. cannot be regarded but as the product of an exaltation of the vital action. This is proved by the fact, that diverse alterations take place under the influence of the ordinary irritating agents which produce sometimes one form of disease, sometimes another; and that certain forms, evidently inflammatory, such as an erysipelas, are observed to degenerate into tetter, and *vice versâ*; it is proved likewise, by the circumstance of an internal inflammation changing itself often into an affection of the skin, and reciprocally, according as the cause acts with more or less intensity, and as it acts upon a person predisposed to one inflammation rather than another. The difference of the products of inflammation is easily explained: the vital exaltation draws the fluids into the organs, or into the tissues in which it has its seat; if there be an afflux of blood, we have an inflammation; if of the sebaceous humours, we have the scabs of tetter and other complaints; if of the lymph, there is lymphatic engorgement, &c. It is thus that the same cause produces different effects, according to the tissue affected, the individual constitution, the predominance of certain fluids, and the alteration which the irritation causes them to undergo. It is not necessary, therefore to have recourse to specific maladies, to explain this diversity of form, a circumstance of disease which is not more surprising when it occurs externally, than when it appears internally.

Are we to conclude, after this rapid glance, that the treatment must be invariable in all kinds of cutaneous affections? By no means; for as certain agents irritate more particularly certain organs and certain tissues than others, there are likewise certain agents which act more particularly than others in recalling them to their normal state. The fundamental part of the treatment will, however, always consist in diminishing the vital energy of the tissue; but we attain this end sometimes by emollients, sometimes by revulsion, sometimes by exciting the part to a higher degree of action, with the view of advancing the inflammation to its highest stage of intensity, as is done by a blister, by cauterization, and by irritating frictions; or with the view of changing one irritation into another more easy to cure. Our limits do not allow us to develope here these propositions, which we must be content to state.

PSORA—ITCH.

Eruption of little pustules, hard at their bases, the summits of which present a transparent vesicle, accompanied with an intense itching. This eruption occurs on different parts of the body, and principally in the joints of the fingers, at the bend of the arm, at the wrists, on the hams, on the chest and abdomen, on the internal side of the thighs, on the back, and rarely on the face. The itchiness is augmented by heat; it may become so excessive as to occasion sleeplessness, nervous attacks, and inflammation of the viscera. In this last case it may happen that the eruption disappears; there is a metastasis from the exterior to the interior, and, in common language, the itch is then said to have gone in, but in reality it is only one irritation displacing another.

Different names have been given to the itch, derived from the form under which the eruption presents itself;

such are the *miliary itch*, the *canine itch*, called thus when the pustules are very small and close together; it is accompanied in that case with a very intense itching; the *pustular itch*, so named when the vesicles are very large, and contain a greater quantity of purulent matter.

Causes.

It has been attributed to the presence of an insect called *Acarus scabiei* or *sarcoptes*; the evidence of its existence is not universally admitted. The partizans of this theory not only explain by this means the propagation of the itch from one individual to another, but the continual and almost unlimited renewal of the pustules in the same individual. However this may be, the development of the malady is favoured by a want of cleanliness, the fineness of the skin, humidity, and by cohabitation with persons affected.

Prognosis.

When it is not attended to, it may transform itself into obstinate tetter or into an eruption of boils; or it may be superseded by an internal phlegmasia, more or less dangerous according to its seat and its intensity. In the greater number of cases it is attended with no danger.

Treatment.

External.—The eruption must be made to yield as promptly as possible to prevent the degeneration mentioned. The emollient topical applications being useless, the plan is to supplant this irritation by another. The means which succeed best are in the first place sulphurous fumigations; then follow hydro-sulphurous baths and lotions, washing with soap, the sulphurous, the oxygenated, and the mercurial ointments, that made with oxide of manganese, the citron ointment. Astringents produce

likewise the same results, but by diminishing the action of the skin, they may increase that of the viscera, and produce inflammation there. When we employ frictions, it is very useful to join with them the warm bath. Of late the chlorides of lime and of soda have been extolled as having produced rapid cures.

Internal.—Light regimen, and abstinence from stimulants and sudorifics, which might irritate the digestive tube, and fix the inflammation there. If, notwithstanding these precautions, there supervene a visceral phlegmasia, and if at the same time there be a recession of the cutaneous affection, we treat this phlegmasia with emollients, with topical or general bleeding, according to the case, and establish artificial drains as substitutes for the irritation of the skin.

PRURIGO.

Symptoms.

Eruption of conical pimples, almost imperceptible, not pustular, congregated closely over the whole surface of the skin, and principally upon the chest, the arms, the thighs, and the abdomen. The eruption is preceded and accompanied by insupportable itchiness, generally constant, but with exacerbations in the morning and evening. In some cases there is complete intermission for some hours and even days, then violent attacks for seven or eight minutes. The pain and the itchiness sometimes give rise to convulsions.

This malady has been divided into *Prurigo formicans* and *Prurigo pedicularis*; the first is so denominated on account of the itching, which resembles the bites of ants, and the second species derives its name from the circumstance of its being kept up by the presence of lice in the cutaneous tissue.

Causes.

No peculiar causes distinct from those of other cutaneous affections are known; yet the influence of a warm climate may be regarded as favourable to the origination of this disease. Although all ages are subject to it, yet infancy and old age are peculiarly exposed to it. This malady has been sometimes confounded with the itch, of which it might be only the greatest degree of intensity.

Prognosis.

This malady, of which the symptoms are sometimes so terrible that authors give it the name of *ferox*, is often incurable; it may drive patients to the commission of suicide, give rise to mania, or to serious inflammations of the viscera, particularly when it is, as they say, repelled.

Treatment.

The same as that of the itch. To appease the itching with saturnine and opiate topics. In prurigo pedicularis, to employ mercurial frictions to destroy the insects. Frequent warm baths, light and mild regimen, emollient drinks. If internal sympathies are developed, to treat them by appropriate means.

HERPETIC AFFECTIONS, TETTER.

Tetter consists in a pustular inflammation of the skin, with redness, heat, itchiness. The pustules burst, and their desiccation gives rise to the formation of scabs of different kinds, or to ulcerations, according as the irritation of which they are the product, is superficial or profound, intense or light, or as they predominate in certain tissues of the skin, which are so many circumstances ne-

cessarily leading to diversity in the nature and quantity of these morbid secretions.

Symptoms.

Although tetter presents itself under forms extremely varied, we may nevertheless refer them to a common type, by taking for our guide the inflammation of which they are the result. Thus generally after an itchiness more or less incommoding, after a tumefaction resembling that of erysipelas, upon a surface of the skin generally limited, there is an eruption of little pustules, distinct or confluent, permitting the escape of a serosity more or less abundant, which concretes sometimes into furfuraceous plates, sometimes into scales of different sizes, and sometimes into dry or humid crusts, varying in depth and extent. Sometimes in this disease a scab covers an ulcer of greater or less depth, or this ulcer remains open, is red, and obstinate, tending more and more to invade the neighbouring parts. Hence the name of furfuraceous, squamous, crustaceous, pustular, &c. tetter. There are likewise many other varieties of tetter to which authors have given different names, and which we think it useless to enumerate, as these divisions can be founded only on difference of form, and not upon a difference of the morbid process. Tetter is fixed and ambulatory, or serpinginous; it may return periodically at certain seasons of the year; its course is generally chronic; it may be superseded by internal affections more or less serious; these are the cases of metastasis, which they improperly call tetter struck in, or repercussed.

Causes.

Tetter develops itself under the influence of an internal or external inflammation, or in consequence of the simultaneous existence of both, and its diverse forms are

only the result or product of an inflammation more or less intense. The variety the least inflammatory is the *furfuraceous* tetter, or the *herpes farinosa*; but if it be irritated, it will become the *squammous* tetter; this, by irritation may assume the *pustular* form with redness; the pustular in its turn may lead to the *corroding* herpes, which is the highest degree of herpetic inflammation. These varieties likewise depend often on the seat which the disease occupies; thus we often see it dry on the back, crusty or farinaceous on the chin, red and inflammatory on the cheeks, &c. &c. All the inflammations of the skin may assume the herpetic form, while the herpetic disease may likewise transform itself into any inflammation whatever, whether internal or external.

Since it has been shown that herpes is a cutaneous inflammation, or sub-inflammation, it follows that it may be produced by all the stimulating or irritating agents which act upon the skin, and which are capable of producing other kinds of inflammation. We must only recognise a predisposition, or to speak more correctly, a peculiar irritability which disposes to this form rather than to another. We regard as being peculiarly in this state of predisposition, persons of light complexion, who have a delicate skin, those of a lymphatic, scrofulous, scorbutic, or phthisical constitution. The occasional causes then are the applications of irritants to the skin, insolation, want of cleanliness, dampness, the employment of blisters, and of issues, the frequent occurrence of boils and erysipelas, certain ingesta which irritate the alimentary canal, the irritations of which repeat themselves more or less readily on the skin, according to the constitution of the individual; moral affections of great intensity likewise occasion this disease, as numerous examples demonstrate; the suppression of a periodical hæmorrhage, or other evacuation, as of an issue, and violent exercise also give rise to it. Herpes may

succeed to variola, to rubeola, to scarlatina, in one word, to all the irritations of the skin.

The reappearance of herpes at certain periods is explained by the disposition which the skin, like most other organs contracts, to receive anew the irritation, with which it has been once attacked, the determining causes remaining the same, and *a fortiori*, when the influence of these causes is increased, as happens in certain seasons.

Prognosis.

As a general proposition, we may assert, that herpes is easily cured in infants, obstinate in adults, and almost incurable in old persons. It is more stubborn in women than in men, when it coincides with the final suppression of the menses. In lymphatic constitutions, disorganization occurs more readily, and herpes is more rebellious; then follow bilious individuals whose very irritable gastric system contributes to keep up the cutaneous irritation; finally, persons of a sanguine constitution are most readily cured. We should not give these propositions too comprehensive a sense, for the duration of the inflammation, its degree of intensity, the extent and depth of the tissue which it implicates, render the cure more or less difficult, and often impossible. When herpes succeeds a protracted internal malady of the chest, or lower belly, the prognosis is unfavourable, and if it be cured, the internal disease may reappear. When this disease exercises no influence over the viscera, the prospect of cure is favourable; if there is continual fever, and it has connection with the irritation of the skin and the viscera, the prognosis is unfavourable.

Treatment.

It differs according as the complaint is light and attended with little inflammation, or obstinate, and accompanied

with violent inflammation. Thus, in recent furfuraceous herpes, it is generally sufficient to use the warm bath, to provoke some revulsive evacuations, if the constitution permit the measure and the digestive tube be sound, and to administer mild sudorific drinks. If the disease do not yield to these means, frictions with the sulphur ointment, or the use of the hydro-sulphurous baths, will dissipate it. If the herpes be red and painful, we must calm the irritation by emollient applications, in fomentations and cataplasms, such as the decoctions of mallows, barley, or dog-grass; the gummy solutions; milk; oleaginous frictions; by warm baths, simple or gelatinous; a light and vegetable diet; by local bleeding around the seat of the disease, and even by general blood-letting. If we observe a relation between the herpes and an habitual evacuation, we must re-establish the evacuation, and calm gastric irritation, if it exists, by emollients. If herpes be critical of an internal irritation, it is not prudent to make it disappear promptly, even if that were practicable, for, in suppressing the vicious action of the skin, we may cause that of the interior to re-appear, unless we establish an artificial irritation by means of an issue.

All these precautions being taken to calm the irritation as well internal as external, we place the patient under a regimen calculated to allay irritation, proportioning it to his strength; we prescribe the prolonged use of white meats, fresh vegetables, cooked fruits, milk. We banish salt provisions, ragouts, rich food, and spirituous liquors, not because they produce acrimony of the fluids, but because they irritate the digestive organs. The disease will often yield to these means alone. If they persist, we shall have recourse to the most appropriate revulsives. *Internally*, these are mild purgatives, which are suitable for persons of a good constitution, and whose digestive organs are perfectly sound; afterwards sudorifics may be

used. But they do not suit persons who are nervous and irritable, weak, delicate, and habitually constipated. We should suspend their use whenever they occasion gastric symptoms. The sudorific drinks most used are the ptisans made of elm, wild violet, fumitory, rumex patientia, scabiosa, menyanthes, solanum dulcamara. Persons whose nervous system is very irritable, should confine themselves exclusively to a diet of the feculent substances, of milk, to aqueous drinks, to gelatinous broths, to the juice of fresh plants; they should likewise make use of the warm bath.

The *external* revulsives are, in the first place, the preparations of sulphur, such as ointments of sulphur, hydro-sulphurous lotions, the natural, or artificial hydro-sulphurous baths, douches of the same nature, and emollient or sulphurous vapours. We likewise employ mercurial ointments, that of iodine, the citron ointment, decoctions of the narcotic plants, metallic and vegetable astringents, such as the sulphate of zinc, the acetate of lead and of alumine. The substances containing tannin may be employed with success when the herpes is not of the phagedenic character, and when there is neither fever nor internal irritation. The medicinal prussic acid in the proportion of a drachm for six ounces of distilled water or alcohol, used as a lotion, produces sometimes, a very prompt cure. In certain cases the cauterization of the pimples with nitrate of silver, muriatic acid, or any other caustic is practised with success; in other cases the inflammation is covered with a large blister to destroy it entirely, by removing the epidermis, but this mode may cure or double the disease. If the inflammation becomes exasperated under these diverse topics, we replace them with soothing applications, to resume them at a later period.

The phagedenic herpes should be treated at first with local bleedings and emollients, to calm the irritation; we

then extirpate the ulcer with the bistoury, with the hot iron, the nitrate of silver, the muriate of antimony, &c. It is essential to allay the irritation before using these means; without this precaution the ulcer might become extremely obstinate, and assume the cancerous character.

TINEA.

This affection is in relation to the scalp, what herpes is to the rest of the body. There is no essential difference between them. In fact, tinea is a pustular inflammation, the vesicles of which permit a matter to escape, and leave an ulceration, which covers itself with crusts of different forms.

Symptoms.

We see upon the hairy scalp crusts, more or less close to each other, sometimes confluent, grouped in patches, or extended uniformly over the whole head. These crusts assume different forms, to which authors have given different names. Thus they call it *Tinea favosa*, when the crusts resemble a honey-comb; *Tinea granulata*, when they are prominent in the form of grains; *Tinea mucosa*, when they permit a thick fetid matter to ooze out, which glues the hair together; *Tinea porriginosa*, or *furfuracea*, when they detach themselves in the form of scales of bran; *Tinea amiantacea*, when the crusts assume the form of stalactites, of amianthus, &c. None of these differences are essential, they depend only on the abundance, more or less considerable, of the humour secreted, and its disposition to concrete under different forms. Our attention is to be given only to the intensity of the irritation and its extent. If the scalp is hot and red, and there is great exudation, the tinea is inflammatory; if the crusts be thinly scattered and furfuraceous, there is little irritation; this is the case also when the crusts are very isolated.

Causes.

This affection is not contagious, but the disposition to contract it may be hereditary. Although no age or constitution is exempt from it, yet it selects in preference children and youth, and the lymphatic and scrofulous.

It is contemporary, sometimes, with engorgement of the lymphatic glands, and with chronic inflammation of the eyelids. Herpes and tinea sometimes supplant each other alternately. The occasional causes among persons predisposed, are want of cleanliness of the head, lice, atmospheric vicissitudes, bad nourishment, and perhaps an affection of the alimentary canal.

Prognosis.

It may remain stationary for a long time without any perceptible influence on the internal parts, but if it be exasperated by the treatment, it may become very intense, give rise to collections of matter in the scalp, to engorgement of the lymphatic glands, to fever, and even to cerebral inflammation, and thus prove fatal. It may disappear by the development of an internal inflammation, sometimes it occasions cancer, phthisis, and other serious maladies. It does not readily disappear without medical treatment.

Treatment.

To shave the head, and afterwards, if there be intense inflammation, to apply emollient cataplasms upon the scalp, and prescribe a mild and vegetable regimen. The application of leeches around the parts affected may be very beneficial. After having subdued the inflammation by these means, more or less frequently repeated, we employ stimulating topics, to destroy the diseased action. These are of various kinds; but those which are most re-

lied upon, are hydro-sulphurous or mercurial lotions, the ointments of sulphur, those of pulverised charcoal, alone or mixed with sulphur. Lotions and ointments of iodine, and iodide of mercury, may prove very useful. Should not the employment of the chlorides be tried? The decoction of the narcotic and aromatic plants are also recommended, such as the poppy, morel, hemlock, lavender, wild thyme, &c.; likewise the metallic astringents, as the acetate of lead, the sulphate of zinc, alumine. If metastasis is apprehended, we have recourse to artificial drains, such as setons, issues on the back of the neck, blisters. If the ulcers become inflamed, we treat them with emollients, leeches, and abstinence. If the alimentary canal be sound, the diet should be analeptic without being stimulating.

TRICOMA, OR PLICA POLONICA.

This affection is characterized by an inextricable interlacement of the hair, ordinarily accompanied with great sensibility of the scalp, resulting from an irritation of the bulbs of the hair; it is very common in Poland.

Causes.

Want of cleanliness; in fact this disease never occurs, except among the poorer classes, who wear their hair long, entangled under a hot cap, and who never use the comb, as we see among the peasants of Poland, and other countries.

Treatment.

The treatment must not be commenced by shaving the head, for as plica is generally accompanied with an oozing of matter which has become habitual, the sudden suppression of this kind of issue might give rise to irritations,

such as rheumatic pains, internal inflammations, inflammation of the scalp, as experience shows. We should therefore commence by removing the irritation by emollient and oily fomentations, by the application of a blister to the back of the neck, or to the arm. When the irritation is calmed, we may cut the hair without inconvenience. The complications which may exist must be combated by suitable means.

LEPRA.

The skin may be affected in conjunction with the subcutaneous cellular tissue: this is what occurs in lepra. In this affection the skin is thickened, deformed with eschars, which crack, and are rough, pruriginous, dry, or humid.

Many divisions of the disease have been made, but an attentive examination would tend to establish the opinion, that this extraordinary deformity of the teguments may be referred to two modes of commencement. Sometimes it commences with the skin, and then it has a great analogy with herpes; at other times it commences with inflammation of the subcutaneous cellular tissue, and particularly of the lymphatic system: the first variety may be referred to that named the Lepra, or Elephantiasis of the Greek; the second to the Lepra, or Elephantiasis of the Arabians.

Symptoms.

Lepra, or Elephantiasis of the Greeks.—The skin covers itself with spots, which degenerate into white, cracked, rough, and hard crusts; passing successively into a state of ulceration, which alters and disorganizes the skin in a diversity of ways, according to the seat and intensity of the disease. If the face be affected, the features become deformed, enlarge, and give it the appearance of a

lion's face; hence the name of leontiasis. If the inferior extremities are affected, the foot and leg swell, and become wrinkled in a horrible manner, so that the parts resemble the foot of an elephant, whence the name elephantiasis. There is then almost complete insensibility of the skin; it often occasions the falling off of the feet, the hands, and the fingers. When the irritation is intense, and when it occasions an abundant afflux of the fluids, it is called red or scorbutic lepra. If the crusts become white, dry, and insensible, it is called white lepra. It is called variegated lepra, (*lepre panachée*,) when the crusts are white and red. It is easy to see that these varieties are not essential.

Lepra, or Elephantiasis of the Arabs.—It may attack different parts of the body, but as the inferior extremities are generally the part affected, we take this case for our model. Pain in the groin, swelling in this region, and an elevated line, resembling a cord, following the course of the lymphatics. The limb is painful and swelled, and motion almost impossible. There is at the same time fever, lassitude, disgust, nausea, in one word, all the symptoms of an irritation of the alimentary canal. This disease ceases, and renews its attacks repeatedly, but the limb remains always swelled, and at last, at the end of two or three years, it suffers from the same deformities as in elephantiasis of the Greeks. Still the skin is not at first affected, but when the disease has continued for a long time, it is covered with vesicles, which are afterwards converted into rugous eschars. This affection has much analogy with certain inflammatory swellings of women in child-bed, and with the induration of the cellular tissue of new-born infants.

Causes.

The predisposing causes seem to be hereditary, and in-

herent in certain climates. The first variety is generally found in Egypt, in the Isle of Java, in certain provinces of Sweden, and the second is met with in some parts of Asia and Africa, and particularly under the torrid zone. The occasional causes are want of cleanliness, bad nourishment, probably the use of fish, and the influence of climate. By some, the leprosy of the Greeks is regarded as contagious.

Prognosis.

When this affection is of long standing, it is very difficult to cure. If there is but little irritation, patients may live for a long period suffering only from the deformity; but if there be much irritation, the disease is reflected on the viscera, and occasions death.

Treatment.

We must act with energy at the commencement to prevent disorganization. We employ then local, and even general bleeding, with boldness, and repeat it without hesitation, if the case requires it. When the inflammation is allayed, if the disease does not yield, astringent applications are employed with success, such as the solution of the acetate of lead, and the compressive bandage in the lepra of the Arabians. In that of the Greeks, after having exhausted all the resources of the antiphlogistic treatment, we may resort to stimulating applications, at first to the warm bath, afterwards to the hydro-sulphurous baths, to the ointments of sulphur, mercury, and iodine, as in herpes, and perhaps to the chlorides. If the inflammation returns, we suspend the employment of these medications, to resume the antiphlogistic treatment. In the cases complicated with internal phlegmasiæ, we treat the complications by the ordinary means.

INDURATION OF THE SKIN IN NEW-BORN INFANTS.

New-born infants sometimes suffer from an affection which seems to have some relation to those which have been described. The skin and subcutaneous cellular tissue become hardened in a remarkable manner. This disease commences sometimes with an erysipelas, but most frequently without it. The limbs become swelled, hot, and painful to the touch; the infants cry, and suffer from embarrassed respiration, and die.

Treatment.

The idea of a specific property has caused baths of sage to be recommended in this disease, but this substance has no specific property. If the infant is strong, three or four leeches are to be applied; he is to be put into a warm bath, and emollient fomentations are to be employed. If the child be cold and weak, we abstain from bleeding, and confine ourselves to warm baths, rendered stimulating by the decoction of sage, or any other aromatic plant.

ARTHRITIC AND MUSCULAR PHLEGMASIÆ.

The fibrous system composing the apparatus of locomotion, comprehends the muscles, their aponeurosis, and their tendons, the ligaments, the synovial capsules, and the periosteum. These tissues, the most of which are insensible in their normal state, acquire an excessive sensibility in the morbid condition, and when one of the tissues is inflamed, the others often suffer at the same time, or rather the irritation transmits itself from one to the other with the greatest facility. This inflammation may likewise assail the neighbouring parts, as the cellular tissue, and give rise to phlegmon, and to abscess. It may

repeat itself upon the viscera, either by abandoning its primitive seat, and then it is a real metastasis, or without leaving the part originally affected; most of the external phlegmasiæ, cutaneous or otherwise, act in the same manner. The idea of humours, invented for the sake of explaining the sudden transfer of pain from one part to another, are altogether chimerical.

The common theory of irritation is sufficient to account for these phenomena.

Different names have been given to the affection of these tissues, according as the pain occupies one or more articulations, the synovial membranes, or the fibrous muscular tissues, according as it is acute or chronic, with or without tumefaction, fixed or wandering: such are the names of gout, of rheumatism, of gouty rheumatism, &c. The slightest attention will show that these denominations are faulty, because they do not express the nature of the malady. The name of arthritis, and of muscular inflammation, or myositis, are much more proper.

Arthritis is acute or chronic, confined to one articulation, (monoarthritis,) or involving several, (poluarthritis.) The same is the case with muscular inflammation. From the most acute to the most chronic forms, there are a great number of shades; but we must beware of taking them for essential maladies, or diseases *sui generis*.

These two orders of phlegmasiæ sometimes exist at the same time, or change themselves into each other. The causes of articular and muscular inflammations are, in the first place, cold, particularly if it acts when the body is heated. In these cases, the action of the skin is increased, and if the cold suspends it suddenly, it is repeated upon the viscera, or upon the muscles, or upon the ligaments, and the articular capsules, or upon all these points simultaneously. Then follows, in the list of causes, irritation of the viscera, and particularly of the digestive organs;

thus we commonly meet with this affection among persons addicted to the pleasures of the table; these inflammations are likewise occasioned by the suppression of an habitual evacuation, and by the abuse of venereal pleasures. The alterations of the articulations, and the morbid productions which we sometimes find in the synovial capsules, should be considered as the result, and never as the cause of these phlegmasiæ, although they may contribute to keep them up.

SIMPLE ARTHRITIS, THE GOUT OR PODAGRA OF AUTHORS.

Gout is an inflammation of the synovial capsules, and articular ligaments of one or more of the fingers or toes.

Symptoms.

The attack is sometimes sudden, but in the greater number of cases, it is preceded by general uneasiness, by disgust and dejection, in one word, with all the signs of an affection of the digestive organs; there is afterwards, an explosion of pain more or less acute in the great toe, or more rarely in another articulation of the foot; this pain is accompanied with shivering, heat, and with fever, which goes on increasing until the following night. All the symptoms diminish then in intensity, or cease entirely, and we find the suffering part red and tumefied. During many days the pain and fever return ordinarily towards evening. The inflammation does not always attack the toe which had been first affected, but it assails sometimes that of the other foot; it then, in another attack returns to the first, or shows itself in another articulation. Finally, after having suffered more or less severely during two or three weeks, the patient finds himself entirely restored. There are some individuals who only experience a slight transient swelling in one or more

of the joints, without any fever. The gout may confine itself to this first attack, but more generally it appears at intervals more or less remote, after the lapse of some months or years, and at certain seasons.

The course of the disease is not always the same. The inflammation, after having been seated in the articulations, sometimes abandons them suddenly, and is replaced by that of some of the viscera, and most frequently by that of the stomach, whence result anxiety; nausea; vomiting; pains at the epigastric region; the ordinary signs of gastritis; if the heart be affected, palpitations and syncope occur; if the lungs, symptoms of asthma make their appearance; if the brain be attacked, there may be cephalalgia, more or less violent, encephalitis, apoplexy, palsy, &c. It is in these cases that the gout is said to have retroceded, and that it has been thrown upon the stomach, the heart, &c. These words are devoid of sense, or they express an absurdity. In all these instances there is a metastasis, and nothing more; that is to say, an inflammation supervening in the stomach, the heart, &c. has displaced that of the articulations. It is always in accordance with the principle, “*duobus doloribus simul obortis, sed non in eodem loco, major obscurat alterum.*” Let it suffice to have stated this theory, the limits of the work not permitting us to enter into a detail of the proofs which serve to demonstrate it. The gout offers, besides, many other shades, which it is useless to enumerate. In an ultimate analysis of the disease, we always have an articular phlegmasia, acute or light, recent or ancient, with or without complication of internal phenomena.

Causes.

Predisposing.—A plethoric constitution, the sanguineo-bilious temperament, a hereditary organic predisposition.

Occasional.—The pleasures of the table, the abuse of

spirituous drinks, venereal excess, a luxurious and sedentary life, the impression of cold, humidity, the suppression of an habitual evacuation, of an issue, of a cutaneous eruption.

Prognosis.

This affection is not dangerous while the inflammation confines itself to the articulations, but if there is a concomitant internal inflammation, or a metastasis, the danger is in proportion to the seat and intensity of this inflammation. The chronic gout is more serious than the acute, because the viscera and the articulations have acquired the habit of irritation, and it remains fixed in them, and occasions, in the course of time, diverse alterations in them.

Treatment.

Nothing is more complicated, or more contradictory than the modes of treatment, pursued in all ages, in this affection; this might be expected, for, in regarding this malady as *sui generis*, it was natural to seek a specific for it.

The treatment most appropriate in the actual state of the science, consists in removing the inflammation at its commencement by leeches. If we have recourse boldly to this expedient, in the first hours of the attack, we will often prevent the whole series of symptoms that otherwise would follow. Even when the inflammation is ancient, and when it has already affected other articulations, we employ the same means, and pursue the phlegmasia by local bleedings, wherever it makes its appearance, for, if we do not dissipate it as in the first case, we at least render the attack more tolerable. The quantity of blood to be taken, and the number of times the leeches are to be applied, must be in proportion to the violence, the extent,

and the obstinacy of the inflammation; emollient cataplasms are then to be applied, notwithstanding the swelling that may supervene. If there be symptoms of gastritis, emollient drinks, demulcent regimen, little or no food. When the symptoms diminish in intensity, when there is no fever, and when the tongue becomes pale and moist, we may operate a light revulsion on the intestinal canal, by means of some mild purgatives. If there be metastasis to the interior, that is to say, if the arthritic inflammation is replaced by a phlegmasia of the stomach, of the pleura, of the lung, of the heart, of the brain, &c. the internal inflammation may be sufficiently intense to require prompt and copious general and local bleeding. We may, at the same time, employ revulsives externally, to recall the inflammation to its primitive seat. This practice is essential even when the internal inflammation has but little intensity.

Most of the irritating or stimulating topical applications may conduce to this object; but among the different revulsives, that called the plaster of Pradier, uniting the effect of a blister with that of a cataplasm, deserves the preference. Its composition is as follows:

R. Balm of Mecca	-	-	four drachms,
Peruvian bark	-	-	one ounce,
Saffron	-	-	half an ounce,
Sarsaparilla	}	-	āā. one ounce,
Leaves of sage			
Rectified alcohol	-	-	three pounds.

Dissolve the balm in a third of the alcohol, and macerate the other substances for twenty-four hours in the remaining two-thirds; strain, and mix the liquors; to this mixture add six or seven pounds of lime water and preserve it in well-corked bottles.

To make use of it, we pour some drops upon a flaxseed cataplasm, which we apply as hot as possible upon the af-

fect part, and renew it twice a day. Sinapisms may be substituted for this preparation. Revulsives should not be employed in simple gout which makes its appearance for the first time, except when the inflammation has fallen or has a great tendency to fall upon the viscera. In this case, no sudorifics or other internal stimulants which might exasperate the inflammation, should be used.

We prevent a return of the attacks by an avoidance of the occasional causes, by a perseverance in a mild and moderate diet; if the patient has been accustomed to high living, he must renounce it forever.

For some time, the use of iodine internally as well as externally, has been recommended in gout, and many examples are cited of solid cures obtained by this medicine. The good effects of this substance in chronic engorgement of the glands is well known, and it would appear from the trials that have been made, that it acts in a similar manner upon the white tissues of the articulations. Whatever may be the fact, iodine should never be given internally, when the digestive organs have a tendency to inflammation.

ARTHRITIS OCCUPYING THE GREAT ARTICULATIONS, OR RHEUMATIC GOUT.

This affection differs from the latter only in this, that instead of attacking the small articulations, it attacks the great, or it assails both classes, either simultaneously or in succession.

Symptoms.

Heat, swelling, acute pain in one or more articulations, augmented by pressure, or by twisting and motion, according as the inflammation is confined to the ligamentous tissues and to the synovial capsules, or extends to the neighbour-

ing cutaneous and cellular tissues. The pain is sometimes so acute that the limb cannot endure the slightest motion without the suffering becoming horrible. This phlegmasia developes many sympathetic phenomena, and principally irritation of the digestive organs, fever, lassitude, clammy mouth, anorexia, thirst, sleeplessness; ordinarily there is exacerbation in the evening. After having persisted for twenty-four or thirty-six hours in an articulation, there is a diminution of all the local and sympathetic symptoms. Some hours after this the phenomena of inflammation are renewed, sometimes in the same articulation, but most frequently in another. Inflammation then abandons this new seat to reproduce itself in a third, and it may thus travel over the greater part of the articulations, from the smallest to those of the pelvic basin, the vertebræ, the ribs, &c. Sometimes it invades three or four and even a greater number simultaneously. This inflammation may extend itself to the contiguous muscles, and then there is a complication of arthritic and muscular inflammation; like the gout it abandons its primitive seat to fix itself upon the viscera.

Causes.

The same as those of arthritis, called gout, and more particularly cold, dampness, atmospherical vicissitudes, for it is seldom that persons exposed often and for a long time to the action of these causes, do not at last contract an articular phlegmasia.

Prognosis.

This affection lasts from five or six days to two months; its termination, which is ordinarily fortunate, is announced by an abundant perspiration, or by a diarrhœa, a hæmorrhage, or a cutaneous eruption. When inflammation remains long fixed upon a great articulation, there may

result what is denominated a white tumour, or a purulent collection, or caries of the bone, &c. When there is metastasis to the interior, the danger results from the intensity of the inflammation, and the importance of the viscus upon which it has fallen.

Treatment.

Nearly the same as that of gout. In the acute stage, abundant local bleeding frequently repeated; emollient fomentations; demulcent drinks; absolute abstinence if the fever is brisk; a light and mild diet, if the gastric symptoms are not very prominent. In the chronic state, after the employment of the same means as those enumerated, revulsives, such as the moxa, a blister, the plaster of Pradier, aromatic fomentations and fumigations, douches, electricity, the covering of the affected parts with wool, mild purgatives, drinks slightly sudorific. If the digestive organs are in good condition, the use of iodine in frictions is to be tried, with a mild and limited diet. If the inflammation returns to the acute state, this treatment must give way to the employment of antiphlogistics. If there is recession of the disease, or metastasis to one of the viscera, emollients must be employed internally, and revulsives externally, to bring back the irritation to its primitive seat. Some practitioners recommend the employment of tartar emetic in divided doses, in acute rheumatic gout, and experience appears to confirm the utility of this practice, provided the intestinal canal be exempt from all irritation. The dose is four or five grains in twenty-four hours.

MUSCULAR INFLAMMATION, MYOSITIS, RHEUMATISM.

The inflammation of the muscular, tendinous, and aponeurotic tissues, constitutes the rheumatism, properly so

called, of authors. These phlegmasia are either simple, that is, confined to the tissues designated, or they are complicated with inflammation of the neighbouring articulations; the latter is the rheumatic gout described above. Sometimes, and principally in the acute state, the inflammation assails the cellular tissue interposed between the muscles and the aponeuroses, and there results promptly a phlegmonous state. Rheumatism is acute or chronic.

Symptoms.

Acute Rheumatism.—Fever, acute rending pain along the course of the muscles, fixed or moveable, assailing sometimes the great articulations, augmented by pressure, and often even by the slightest touch, but especially by motion. High-coloured urine, constipation, exacerbation towards the evening.

The nature of muscular inflammation is always identical, yet authors give it different names, according to the seat which it occupies; thus it is called *muscular sciatic rheumatism*, when it has its seat in the posterior and lateral and even anterior muscles of the thigh, and in the coxo-femoral articulation. We distinguish this inflammation from the sciatic inflammation by the circumstance, that in the latter, pressure does not augment pain, and that it is not attended by swelling, which occurs in muscular sciatic rheumatism, particularly in the acute stage. It has been called *lumbago*, when it occupies the muscles of the lumbar region; *diaphragmitis* or *paraphrenesis*, when it is seated in the muscular fibres of the diaphragm. There occurs then very difficult respiration, with pain in the region of the diaphragm, vomiting, dry cough, delirium, risus sardonicus. The inflammation of the muscles of respiration, and particularly of the intercostals, is improperly called pleurodynia, for the pain is not in the pleura, but in the muscles. We easily distinguish this affection

from that of the pleura or thoracic viscera, by the circumstance, that in the muscular inflammation, the pain is rendered more sensible by pressure, which is not the case in the other affections. These two affections, however, may coincide. Rheumatism takes the name of torticollis when it affects the lateral or posterior muscles of the cervical region, an affection which renders the motions of the neck, particularly those of rotation, very painful, and sometimes impossible. The rheumatism of the muscles which are about the cranium, has received no particular name, for *gravedo* signifies nothing. We recognise it by an external pain of the head, augmented by pressure, or ordinarily without the concomitance of febrile phenomena.

These diverse phlegmasiæ are displaced with the greatest facility, most frequently to be transferred to other fibrous tissues, but sometimes also they abandon the external parts, to fix themselves upon the viscera.

Chronic Rheumatism.—It sometimes succeeds acute rheumatism, and in that case the commemorative symptoms enable us to distinguish it readily. When it is primitive, there is a dull pain, augmented by pressure, by motion, the heat of the bed, by atmospheric vicissitudes, with a sensation of cold and numbness in the part affected. Although more fixed than in the acute state, the pain may transport itself from one point to another. The functions of the intestinal canal are often deranged, especially when there is an exacerbation. The chronic disease may become acute, and then the symptoms are the same as those already described. It may also be superseded by a visceral phlegmasia, not because the rheumatism has gone in, as they say, but because "*duobus doloribus simul obortis, sed non in eodem loco, major obscurat alterum.*" Between the very chronic and very acute state, there is yet an infinity of shades easily recognised, upon which it is unnecessary to insist.

Causes.

The same as those of arthritis, particularly of the species called gouty rheumatism.

Prognosis.

The duration of acute rheumatism, like that of the gouty rheumatism, is from six to fifty or sixty days. It may terminate by a profuse perspiration, by a looseness, by a cutaneous eruption, &c. If the inflammation be very acute, and be situated in the muscles surrounded by cellular tissue, it may give rise to phlegmon, that is, to inflammation of this tissue, or to purulent collections more or less extensive, the absorption of which may occasion hectic fever and death. When there is metastasis to one of the viscera, the danger is in proportion to the intensity of the inflammation, and the importance of the part attacked. The duration of chronic rheumatism is indefinite; it is liable to relapses, particularly under the influence of atmospheric vicissitudes.

Treatment.

The Acute state.—This phlegmasia must be combated boldly by the antiphlogistic treatment, topical, and even general blood-letting, abundant and often repeated, to meet the exigency of the case, and to prevent suppuration. If suppuration occurs, we must make an outlet for it with the bistoury, to prevent subsequent disorders. If the digestive apparatus is sound, we may try the tartar emetic as in rheumatic gout.

Chronic state.—The same treatment as in chronic arthritis and rheumatic gout. Woollen garments worn next the skin, revulsives externally, dry vapours, douches of the same nature, baths of the thermal or sulphurous waters, aromatic fumigations. Some mild purgatives, if the

state of the alimentary canal permits their employment, a mild, unirritating regimen, the avoidance of cold and moist air. The effects of acupuncture are highly extolled.

HÆMORRHAGES, OR IRRITATIONS WITH A FLOW OF BLOOD.

Hæmorrhages have the greatest relation to inflammation. In both, there is first irritation, then sanguineous congestion, but in inflammation the blood remains in the part, whereas in hæmorrhage it escapes from the vessels. The precursory phenomena of hæmorrhage are the same as those of inflammation, and it supervenes under the influence of the same causes. If the congestion be not one of too great violence, and the blood find a ready outlet, as the flow of blood proceeds, the circulation loses its activity, the sense of weight which had existed previously, dissipates itself by degrees, and the equilibrium is restored.

It follows from this, that we should often consider hæmorrhage as a bountiful interposition of nature, its effect being to dissipate irritation.

In inflammation, we imitate this example of nature, when we have recourse to local and general bleeding to remove sanguineous congestion, and to break up the inflammation promptly. This happy result, however, can only be obtained by acting seasonably, and carrying the blood-letting to a sufficient extent.

The same is the case in hæmorrhage. This discharge, in fact, does not always destroy the irritation, for, if it is not proportioned to the congestion, or if it be arrested unseasonably, we often see it succeeded by inflammation, exactly as inflammation perseveres, or even augments, when the local bleeding is not proportioned to its extent or intensity.

We must then in general avoid interfering with the hæmorrhage, when the blood finds its way readily to the exterior of the body; but if the loss of blood be sufficiently abundant to endanger the patient, we should arrest it even at the risk of augmenting the irritation.

If the hæmorrhage occur in the interior of the body, and does not find an issue, the indication is to calm the irritation, or to replace it by revulsives, or to remove it by practising blood-letting. In some cases the extravasation requires in addition some particular attentions. There is then a perfect identity in hæmorrhage and inflammatory irritation; the causes and treatment are the same; sometimes their existence is simultaneous; sometimes they succeed one another either in the same or in different parts.

But how do the same causes produce at one time hæmorrhage, at another time inflammation? This difference depends on the individual predisposition, upon the texture more or less compact of the tissues irritated, and particularly upon the quantity more or less considerable, of sanguineous vessels with which they are furnished. This explains the frequency of hæmorrhage in mucous membranes, in the lungs, and in the brain, and likewise accounts for their occurring seldom in the serous tissues, and the impossibility of such accidents in the fibrous, osseous, and cartilaginous tissues.

It has been remarked also that persons predisposed to hæmorrhage have in general their hearts large and active, yet, although the energy of the heart contributes to hæmorrhage, it may be occasioned by local irritation alone. The extravasation of blood in one of the viscera, or internal hæmorrhagy, is owing to the irritation of the organ, in consequence of which the blood is drawn to it, in quantities so great as to force its way out at the extremities of the vessels, or even to break them. It is thus that

apoplexy of the brain and lungs occurs, and even sometimes an extravasation of blood into the cavity of the peritonæum. These affluxes may prove promptly mortal; when they are not so, we treat them as inflammations.

Every spontaneous hæmorrhage is, like inflammation, active; it is the product of a vital exaltation of the tissues, and not of their relaxation or flaccidity. There are no passive hæmorrhages, except those we call traumatic, or those which depend on obstacles to the blood, such as a ligature, a polypus, an aneurism, a varix, &c.

The partizans of passive hæmorrhage advance, as supporting their hypothesis; first, the extreme weakness of certain persons who are yet very subject to hæmorrhage; secondly, the absence of the precursory symptoms, which they call *molimen naturæ*; thirdly, cures obtained by tonics, and particularly by astringents.

These objections are only specious, for first, the weakness of the subject proves no more in favour of passive hæmorrhage than in favour of passive inflammation, and in a weak subject, local irritation with consecutive hæmorrhage may readily occur; secondly, the absence of the *molimen naturæ*, only proves that hæmorrhage may take place without an excitement of the whole system; local irritation is sufficient to occasion an afflux of blood; thirdly, real cures have been obtained from the use of astringents; these are coercive means, which may arrest the flow, but which may likewise augment it, if their action is not superior to the reaction which they provoke. A solution of alum, of acetate of lead, of tannin, &c. may suppress cutaneous transpiration, the application of ice may dissipate a phlegmasia, or an astringent collyrium destroy an inflammation of the conjunctiva. Shall we on this account say that cutaneous transpiration, phlegmon, and ophthalmia are passive? By no means. These applications succeed in light irritations and inflammations, which are

made by them to retrocede, if the expression may be used; if they succeed oftener in hæmorrhages than in inflammations, it is because the flow of blood has extinguished a great part of the irritation before they are applied, and because hæmorrhage being often but a slighter degree of inflammation, reaction is less to be feared.

NASAL HÆMORRHAGE, OR EPISTAXIS.

Symptoms.

A flow of blood more or less abundant by the nostrils, often preceded by pain, and weight of the head, by redness of the face, vertigo, dimness of sight, itching of the nasal fossæ.

Causes.

Predisposing.—Infancy and youth, on account of the predominance of vital energy in the superior parts of the body; the sanguine temperament; high living. Epistaxis is often connected with a cerebral or gastric irritation, and sometimes with a hypertrophy of the heart; it may be determined by insolation, by the cravat, or other parts of the dress being too tight, by the suppression of an habitual hæmorrhage, by irritants introduced into the nostrils, by blows or falls upon the head, &c.

Prognosis.

It is moderate; it is rarely a dangerous affection, particularly in persons naturally of a robust constitution. It is often critical of another disease, among others of a cephalalgia, of an encephalitis, of a cerebral apoplexy. In low fevers, called adynamic, or malignant, the emission of a few drops of blood by the nostrils, is regarded as a bad omen, because it indicates a violent inflammation of the brain.

Treatment.

When hæmorrhage is moderate, or critical of another affection, we should beware of arresting it too promptly; if it depends on an irritation of another organ, we combat this irritation by appropriate means; if it is very abundant we expose the patient to the cold air. Cold, or iced lotions or compresses upon the forehead or around the nose; we prescribe also, as revulsives, aspersions of cold, or iced water upon the sexual organs; ligature of the limbs; hot and mustard pediluvia and maniluvia; and finally, when all other means have failed, the plugging of the nasal fossæ.

If epistaxis is vicarious to another hæmorrhage, the latter must be recalled to its primitive seat.

The prudent employment of digitalis is to be tried, if there be a tendency to hypertrophy of the heart, on condition always, that the stomach be not the seat of any irritation.

CEREBRAL APOPLEXY, OR HÆMORRHAGE OF THE BRAIN.

Dissection proves, that cerebral apoplexy is produced by an extravasation of blood: it should therefore be classed among the hæmorrhagies.

Symptoms.

An abolition more or less complete of nearly all the voluntary movements, and of the mental faculties; a comatose state, or somnolence more or less profound; stertorous respiration; redness of the face; there is, however, a continuance of the movements of the heart and arteries, which distinguishes this affection from every other, which may in some respects resemble it. These phenomena are ordinarily preceded by vertigo, by pains in the head, by

epistaxis, by tinnitus aurium, by dimness of sight, by stupor, by distortions of the mouth, by embarrassment of the tongue, and the speech; at other times, the invasion is sudden, and the individual falls as if struck by lightning.

Apoplexy has been divided into slight or imperfect, when the hæmorrhage being inconsiderable, the locomotive powers have not been entirely abolished; into violent, when there is a complete, or almost complete abolition of sensation and motion; it is called *foudroyante*, when the effusion is so considerable and so prompt, as immediately to occasion death. We may readily conceive that, between the slightest degree of apoplexy, which might produce only drowsiness, and a slight debility in muscular movements, and the highest degree of apoplexy, there are many intermediate degrees, which produce partial paralysis, partial convulsions, &c. &c. according as the compression, produced by the extravasated blood, is upon one or another hemisphere, or upon both simultaneously, upon the cerebellum, or the whole encephalic mass; according as the extravasation takes place under or within the meninges, or in the cavities of the ventricles, &c. &c.

Causes.

Predisposing.—A particular irritability of the brain; middle age; a voluminous head; the sanguine temperament; shortness of the neck; plethora; a sedentary life; intellectual labour; grief; chronic phlegmasiæ of the digestive tube, but particularly chronic irritations of the brain, manifested by continued or periodical cephalalgia, by epilepsy, by mental alienation; by a disposition to sleep; by partial palsies; for every ancient or slow irritation of the brain may lead to apoplexy.

Occasional.—An irritation of the brain, and every thing that can occasion the blood to flow towards it with

more or less violence, such are the suppression of an habitual hæmorrhage, of an artificial drain, the recession of a cutaneous eruption, the displacement of another irritation, such as arthritis, an acute or chronic rheumatism, and a metastasis to the brain, and more particularly the action of cold, or of heat, insolation, violent exercise, strong passions, and particularly a fit of anger, excesses of the table, venery, tight cravats, the efforts of child-bearing, straining at stool, coughing, the lifting of burdens, the use of narcotics, in one word, all the causes of encephalitis.

Prognosis.

The gravity of this affection is in proportion to the extravasation of blood, indicated by the greater or less degree of violence in the symptoms; most frequently it terminates in death. Apoplexy supervening upon a chronic inflammation of the brain, is always very serious, for there exist generally under these circumstances, deep and incurable organic changes. It rarely terminates in complete restoration to health; it is subject to relapses, and these are always more dangerous than a first attack. When it does not occasion death, it is ordinarily followed by hemiplegia, more or less complete, by disturbance of the intellectual faculties, and by other cerebral disorders.

Treatment.

Curative.—Copious depletion, by means of bleeding from the arm, from the jugular veins, or the nasal veins, by means of an instrument recently invented by M. Cruveilhier, by arteriotomy, by leeches to the temples, or to the neck, by cupping, or preferably by the bdello-meter, for the sake of greater promptitude, or by producing a nasal hæmorrhage, by means of two or three leeches applied to the mucous membrane of the nostrils, in imita-

tion of nature, who sometimes operates a cure by a spontaneous epistaxis. Cold applications to the head, sinapisms to the inferior extremities, or even to the hands, cool and fresh air, elevated position of the trunk and head, the removal of every kind of bandage or clothing which could prevent the free circulation of the blood. Diet, diluent drinks, irritating glysters, frictions of the same nature upon the limbs, no sternutatories or emetics.

Prophylactic.—Persons predisposed to apoplexy, or who, having already undergone attacks of it, have to fear a return, should avoid all the occasional causes mentioned above. They should use moderate exercise, recall suppressed evacuations, submit to a light vegetable diet, containing but little nourishment; they should make use of aqueous drinks, avoid constipation, without however having recourse to violent purgatives, and produce from time to time, a light revulsion to the digestive tube, if it is in a good condition. For this purpose the use of the following preparation is prescribed with much success:—Super-tartrate of potash one ounce; tartar emetic, one grain: divide into two equal parts, one of which is to be taken each morning in a glass of sugar and water. Blood-letting from time to time, particularly on the approach of symptoms which may indicate the commencement of cerebral congestion, such as drowsiness, dimness of vision, vertigo, the augmentation of muscular debility, convulsive movements of the muscles, &c.

HÆMORRHAGE OF THE LUNGS, AND OF THE MUCOUS MEMBRANE OF THE AIR PASSAGES.

(PULMONARY APOPLEXY, HÆMOPTYSIS.)

We give in general the name of pulmonary apoplexy to an abundant extravasation of blood in the parenchyma of the lungs, and that of hæmoptysis to hæmorrhage of

the mucous membranes; but in addition to the difficulty which often exists of establishing this distinction, it is useless in a practical point of view.

Symptoms.

This hæmorrhage is often preceded by a sensation of uneasiness, of gurgling, and of heat in the chest, and particularly under the sternum, by a circumscribed redness of the cheeks, by dyspnœa, and by titillation in the throat. After these precursory symptoms, which may nevertheless sometimes be wanting, there occurs an expectoration, more or less abundant, of blood, which is red, pure, and frothy. This expectoration returns at intervals, accompanied by efforts of coughing, by redness or by paleness of the face, and coldness of the extremities. In pulmonary apoplexy the cough is more violent, and it may happen that the extravasated blood cannot be expectorated, but this is rarely the case.

The nature of the blood, which is red, not mixed with the food, and frothy, its expectoration accompanied with fits of coughing, with a particular rattling noise, which we hear in the cavity of the thorax by the aid of the cylinder or without it, enable us readily to distinguish this hæmorrhage from that of the stomach, the only disease with which we can confound it.

Causes.

The same as those of pneumonia, a particular, and sometimes a hereditary irritability of the lungs, and of the air passages, organic alteration of these viscera, the suppression of an habitual hæmorrhage, singing, declamation, loud cries, strong moral affections, violent exercise, hypertrophy of the heart, external violence. This malady is very subject to relapse; it assumes either the acute or chronic form, and may return periodically. (See Acute

Phlegmasiæ of the Pectoral Viscera, and Chronic forms of Irritation of the Pectoral Viscera.)

Prognosis.

Hæmorrhage is always an unhappy symptom in subjects of a consumptive habit, as it indicates great irritability of the organs of respiration; it is often a precursory sign of phthisis pulmonalis, which it always has a tendency to keep off, as hæmorrhage dissipates in part, and for some time, the irritation or inflammation of the lungs, of which, consequently, it is the natural remedy. The prognosis is less unfavourable when, after the cessation of hæmorrhage, there remains neither pain nor dyspnœa, nor cough, as in the opposite case; there is hardly any danger when the flow is the result of external violence, or of plethora.

Treatment.

If the hæmorrhage is moderate, we are not in haste to arrest it, for it is often a salutary process of nature. In opposite cases, general blood-letting, repeated according to circumstances, rest, absolute silence, emollient drinks, cold, iced, afterwards slightly astringent, if the patient is already very weak, irritating pediluvia and maniluvia, or sinapisms to the hands and feet; in obstinate cases, a large blister made with ammoniacal ointment applied to the chest, an elevated position of the body, the free admission of cool air.

To prevent relapses, all the occasional causes must be avoided; we combat the inflammatory tendency by a mild and milk diet; if hæmoptysis arises from the suppression of an habitual hæmorrhage, it must be recalled to its primitive seat; and if we cannot succeed in this, we must supply its place with artificial bleedings.

N. B. It is not strictly correct to say, that hæmorrhage

may be the effect of the suppression of an habitual evacuation; on the contrary, this hæmorrhage is suppressed on account of the blood being drawn to the lungs, and retained there by irritation; the basis of the treatment then is the calming of the pulmonary irritation, and the producing of irritation in the primitive seat of the hæmorrhage, to occasion an afflux of blood to it. The same remark applies to all the other hæmorrhages which we name vicarious or supplementary.

HÆMORRHAGE OF THE STOMACH.

(HÆMATEMESIS.)

Symptoms.

The precursory signs of hæmatemesis are in general the same as those of gastritis, as the precursory signs of hæmoptysis are the same as those of irritation of the lungs. These signs are followed by a vomiting of black blood, pure, or mixed with the food, with the drinks, with bile, &c.

The absence of cough and vomiting, and especially the absence of the gurgling and rattling in the chest, enable us with facility to distinguish hæmatemesis from hæmoptysis.

Melæna is nothing but a hæmorrhage of the stomach of the same nature as hæmatemesis; the colour, varying in depth, of the bloody matters discharged, cannot constitute a real difference; but melæna is much more frequently the effect of an organic alteration, of a cancer for example, than simple hæmatemesis.

Causes.

Generally all those of gastritis, and particularly chronic gastritis, accompanied with organic alteration of the stomach and its appendages, the suppression of an habitual hæmorrhage, irritating, caustic, or corrosive ingesta, ple-

thora, external violence; congestions occasioned by intermittent fevers or irritations.

Prognosis.

Hæmatemesis is sometimes a means employed by nature to extinguish an acute inflammation of the stomach, and in this case the prognosis is favourable; it is dangerous if it succeeds a chronic inflammation, because it ordinarily indicates an organic alteration. This observation is peculiarly applicable to melæna. The course of this hæmorrhage is very irregular; it may occur but once, or it may reappear at intervals, and even assume the periodical form, which, however, is a rare occurrence.

Treatment.

If the hæmorrhage is abundant, we must not be in haste to arrest it; if it is violent, we should have recourse to cold or iced acidulated drinks, to topical depletion over the epigastrium, the horizontal position, absolute repose, hot or irritating pediluvia or maniluvia. If the patient be already weakened by the hæmorrhage, we employ the vegetable astringents, such as decoctions of rhatany, of oak bark, of bistort, of tormentil, of the great comfrey, cold applications to the stomach.

When the hæmorrhage is arrested, we should advise for some hours, diet, repose, emollient drinks, and afterwards a very light diet of milk and vegetables. Suppressed hæmorrhages should be recalled to their primitive seats.

HÆMORRHAGE OF THE INTESTINAL CANAL.

(HEMENTERESIS.)

Symptoms.

Evacuation of blood varying in abundance and in redness, at first mixed with fæcal matters, afterwards pure,

and sometimes coagulated. This evacuation is generally attended by the same signs as hæmatemesis, with which it is sometimes accompanied, and from which it differs only in this, that the irritation or organic alteration, that produces it, has its seat sometimes in the stomach, sometimes in the intestines, and sometimes in both simultaneously. The difference is the same as that which exists between gastritis, enteritis, and colitis, whether in their chronic or acute stages.

Causes.

This affection, which is moreover of rather rare occurrence, may be the product of a sanguineous exaltation, occasioned by the irritated or inflamed intestinal mucous membrane; but in the greater number of cases it is the result of organic alterations of the viscera, or of external violence. It is sufficient to say that it is often the result of a chronic enteritis or colitis.

Prognosis.

If this discharge is vicarious to another hæmorrhage, in a subject in other respects healthy and robust, it is attended with but little danger. The prognosis, on the contrary, is unfavourable, when this hæmorrhage supervenes in individuals, who for a long time have been affected with phlegmasiæ of the abdominal viscera; death may occur in the space of a few days or even of a few hours. Moreover, this hæmorrhage may be more abundant than is indicated by the external flow, for on dissection, the intestinal canal has sometimes been found filled with blood. This affection is subject to relapses.

Treatment.

The same as that of hæmatemesis. Cold applications are to be made to the abdomen. If there are signs of acute in-

flammation, leeches to the anus; but we should abstain from blood-letting if the internal and external hæmorrhage is sufficient to compromise the safety of the patient; in this case, besides the external means employed, we should administer vegetable astringents in drink and in lavement.

UTERINE HÆMORRHAGE.

(METRORRHAGY.)

Symptoms.

Continual or interrupted evacuation, by the vagina, of liquid or coagulated blood, varying in abundance, ordinarily preceded and accompanied by fever, by paleness of the face, by pain in the region of the loins, and in the abdomen, having a considerable resemblance to those of women in child-bed.

All these symptoms, and some others which announce an irritation or congestion of the uterus, diminish insensibly, and sometimes cease entirely, as the blood flows. If the hæmorrhage is abundant, there supervenes, as in all other cases of the same nature, debility, prostration of strength, coldness of the whole body, and syncope.

In certain cases this hæmorrhage is so abundant that it suddenly places the patient in the greatest danger. In this case there is a tremendous loss of blood; this loss may take place with or without an external flow, constituting *internal metrorrhagy*. The loss may be equally tremendous as in the case of an external flow. Internal hæmorrhage of this kind cannot take place to an alarming extent, except after delivery, on account of the small capacity of the womb under all other circumstances.

Causes.

Menstrual uterine hæmorrhage is the result of a periodical irritation of the uterus. Far from being a disease, it

is, when kept within proper limits, a natural function, whose integrity is necessary to the health of the female. The same remark applies to that which necessarily follows delivery, but in both cases, the hæmorrhage, if too abundant, departs from the normal condition.

Besides those which occur at the menstrual epochs, the womb is more subject to hæmorrhages than any other organ; they are always the results of irritation, and this irritation produces sometimes hæmorrhage, and sometimes inflammation. Every thing that irritates the uterus or other organs which react upon it, should then be regarded as the cause of the sanguineous afflux of which it is the seat. These causes are generally a particular irritability of the uterus, inviting a flow of blood to this organ; such are the abuse of spirituous drink, high living, blows, falls, violent efforts, moral affections, venery, abortion, laborious delivery, constipation, cold, and particularly that of the inferior extremities, organic alterations. Plethora is also one of the predisposing causes of metrorrhagy; yet thin and nervous women are at least equally exposed to it with the plethoric. The reason of this is, that in debilitated and nervous women, the uterus enjoys in general very great activity, which accounts for this exuberant affluence of blood, of which it has need to get rid. This observation is necessary to dispel the false ideas of passive hæmorrhage, which the occurrence of metrorrhagy in feeble, languishing, and shattered constitutions might lead us to entertain.

Prognosis.

If the hæmorrhage is sudden, and the loss of blood excessively great, particularly if it be attended with cold sweats and convulsions, the danger is imminent. It may likewise be dangerous, even when the flow of blood is slow, if it continues for a long time. When there is or-

ganic alteration, such as polypus, scirrhus, cancer, &c. the chances of cure depend on the nature of these alterations.

Treatment.

If the flow of blood is moderate, we must beware of suppressing it; it is the remedy employed by nature to dissipate irritation; in the greatest number of cases it ceases spontaneously, and the patient has need only of rest and some precautions which belong to the province of hygiene. If the hæmorrhage threatens to become abundant, and the patient is strong and plethoric, general blood-letting: if on the contrary, the woman be of a debilitated constitution, and if nevertheless there are signs of strong uterine irritation, the application of leeches to the hypogastric region. The verity of the fiftieth aphorism of Hippocrates is perfectly confirmed by experience; but few women would at this day submit to the treatment: "*mulieri menstrua si velis cohibere, cucurbitam quam maximam ad mammas appone:*" we observe that a revulsion is here spoken of, which, although less efficacious upon other parts, should never be neglected in urgent cases. If hæmorrhage is already very abundant, we abstain from the further abstraction of blood; but we try to suppress it by other means. The most suitable are the horizontal position, upon a bed rather hard than soft; exposure to cool air; cold, iced, or astringent drinks, such as the decoction of rhatany, of the bark of oak, of comfrey, bistort, and other substances containing tannin, and of tannin itself, in the dose of two or three grains, taken two or three times a day, &c.; the application of compresses wet with liquids of the same nature to the abdomen and to the perinæum; and if the abundance of the hæmorrhage is such as to require it to be arrested with great promptitude, dry cups to the abdomen, and even upon the breasts; cold and astringent injections; plugging with lint, wet with an astringent liquor,

or the introduction, as far as the neck of the womb, of a lemon deprived of its rind. To finish the delivery, and afterwards to solicit the contraction of the womb by pinching, and exciting it through the parietes of the abdomen.

Of late, the trials, which had been abandoned, of the transfusion of blood in women, who would otherwise be condemned to inevitable death from excessive losses of blood, have been renewed. The success which has crowned these efforts should encourage practitioners; for it is especially to these cases, entirely desperate, that the maxim of Celsus is applicable, "*satiùs est anceps experire auxilium, quam nullum.*" Organic alterations require a particular treatment.

The predisposition to uterine hæmorrhages is to be combated by the avoidance of the occasional causes, by a mild and moderate diet, sometimes even by local and general bleeding.

HÆMORRHOIDS.

Symptoms.

A flow of blood from the anus, coming not from the intestines, but from the extremity of the rectum. This hæmorrhage, which has considerable relation to the menstrual flux, is ordinarily preceded by weight of the head, by vertigo, by pains in the loins, by pains, itching and smarting, and the appearance of little tumours around the anus, and in the interior of the rectum. These livid and painful tumours, called hæmorrhoidal, are not themselves the disease called hæmorrhoids, they are only the consequence of the accumulation of blood drawn thither by irritation. They have been divided into the blind, or the dry, and the bleeding, according as they are, or are not followed by a flow of blood, and into external and internal, according to their seat. Hæmorrhage may occur without

the production of these tubercles. After these premonitory symptoms, some of which may be wanting, there occurs a flow of blood ordinarily moderate, and lasting for some hours, or for some days. This hæmorrhage is, like the menstrual flux, ordinarily periodical, but it may have an irregular character. As the blood flows, the other symptoms diminish, and finally disappear entirely.

In the dry hæmorrhoids, the tumours form in the same manner as when they are bloody, they are preceded and accompanied by the same phenomena, with the exception of the flow of blood, or they only occasion a slight oozing, and then diminish and wither until the next congestion.

Although hæmorrhoids are very subject to relapse, they may only appear once or twice in the course of a life.

Causes.

Predisposing.—Middle age, plethora, the bilioso-nervous temperament, a hereditary predisposition, or an *occasional particular irritability*. Stimulants and general and local irritants, such as good cheer, drastic purgatives, and particularly aloes; sedentary habits; riding on horseback; constipation, either on account of the efforts occasioned by going to stool, or on account of the obstacles which it presents to the circulation of the blood in the hæmorrhoidal vessels; the same may be said of pregnancy and accouchements, as also of diverse tumours, and engorgements of the abdominal viscera; chronic irritations of the digestive tube, and its appendages, which draws the blood into these parts, as we see in the greater number of hypochondriacs, who, as we have said in another place, are affected with these irritations; irritants introduced into the rectum, &c.

Prognosis.

In the great number of cases the hæmorrhoids are a sa-

lutary operation of nature, especially when they are periodical; the good health of the individual is dependant upon them so far, that their suppression, or even their delay, may occasion serious maladies. The development of the hæmorrhoidal tumours is sometimes so considerable, that there result from it, as it were, a strangulation, which gives rise to a violent inflammation, and may determine gangrene if not promptly remedied. The hæmorrhoids, or rather the irritation which produces them, may likewise occasion various organic lesions in the membranes of the rectum and the adjacent tissues; but this accident is rare.

Treatment.

In general the treatment of hæmorrhagic irritations. To prevent hæmorrhoids in subjects predisposed, we practice from time to time general bleeding; we advise a mild and vegetable regimen, aqueous drinks, abstinence from every stimulant, and moderate exercise.

If the hæmorrhoidal flux already exists with regularity, we must beware of arresting it, or of preventing its return; we are in that case only to manage it in such a manner that the irritation may not invade the intestinal tube; if this irritation should supervene, we must apply twenty or thirty leeches upon the abdomen, about the point corresponding to its seat. In case there should occur rupture of the large vessels and excessive hæmorrhage, we should first employ astringents, and should they prove ineffectual, have recourse to the ligature. Should the tumour be strangulated, we must refrain from the application of leeches, for experience proves that the irritation which their bites occasion always increases the congestion; in such a case the application of ice, during some hours, to the tumour itself, is the surest means to arrest its development, and to prevent gangrene. Should the ice only be

applied during some minutes, there would be violent reaction, and the inflammation would proceed with redoubled intensity. But if the anus be strongly contracted, without the existence of the tumours, it is the proper case for the full application of leeches, for emollient applications, for general warm bathing, for the introduction of an anodyne cerate into the rectum. If the hæmorrhage is excessive, or too often repeated, we may employ astringents, the saturnine cerate, cold compresses. It will be readily conceived of how great consequence it is to obviate constipation, either by emollients or glysters, or by means of mild laxatives.

HÆMORRHAGES OF THE URINARY PASSAGES.

(HÆMATURIA.)

Symptoms.

A flow of blood from the canal of the urethra, furnished by the kidneys, or by the bladder, and sometimes, but rarely, by the urethra; in this last case, we give it the name of urethrorrhagy. Particular signs enable us to a certain extent to determine these different sources. If the blood flows from the kidneys, the symptoms which precede and accompany its emission, are very nearly the same as those of acute or chronic nephritis. (See Nephritis.) If it comes from the bladder, we meet with the symptoms of inflammation of this viscus, such as titillation or pain at the extremity of the penis, frequent desire to pass the urine, a sense of pain and weight referred to the perinæal region, and finally, a flow of blood. When the seat is in the urethra, the absence of the preceding symptoms, and the continual *stillicidium* of blood, leaves not the slightest doubt as to the diagnosis. But the blood, from whatever part, with the exception of the urethra, it may derive its origin, may accumulate in the bladder, and occa-

sion different symptoms, nausea, fainting, syncope, difficulty of discharging it, if it be formed into clots, an obstacle more or less complete presented by the clots to the emission both of the urine, and of the blood, which is not coagulated, pains, progressive in violence, of the lower belly, occasioned by the distention of the bladder, in a word, all the symptoms produced by the retention of urine. The duration of this malady is ordinarily long, a circumstance which is sufficiently explained by the causes which produce it.

Causes.

All those of the phlegmasiæ of the urinary apparatus. Hæmaturia is sometimes observed to assume periodicity in its attacks, like the hæmorrhoids. It may arise from a suppression of the latter, or of the menstrual discharge, or of any other habitual hæmorrhage.

Prognosis.

When the blood comes from the kidneys, the prognosis is generally grave, for it is most frequently a sign of the presence of gravel, or of an organic and chronic alteration of these viscera; yet this hæmorrhage may be nothing more than a sanguineous exhalation, arising from a state of vital exaltation of the kidneys or the bladder, or it may be the consequence of a solution of continuity, recently occasioned by a fall, by blows, by efforts, &c.; in these cases, the cure is generally effected with ease. These observations are all applicable to hæmorrhages which have their seat in the bladder.

Treatment.

The treatment varies with the causes. If the flow is owing to the presence of calculi in the kidneys or to chronic alterations of these organs, we employ the same treatment

as in chronic nephritis. If it be produced by an acute irritation, whether of the kidneys or of the bladder, we calm this irritation by general blood-letting, and by the application of leeches and cups upon the points corresponding to the seat of this irritation. Emollient drinks, diet, rest, the horizontal position, and fresh air. If the hæmorrhage has been profuse, and it consequently becomes necessary to arrest it, and if the preceding means have not had this effect, we make cold applications to the abdomen and to the perinæum, and use hot pediluvia and maniluvia, cold and moderately astringent drinks, and preserve the bowels in a soluble condition with mild laxatives. If the blood accumulates in the bladder, and the power of discharging it is wanting, we employ the catheter to remove the clots which oppose its exit, and in certain cases to overcome the constrictions of the canal of the urethra; we employ emollient injections to dissolve these clots. If there be a calculus, its extraction is to be effected by appropriate means.

If the hæmorrhage has become periodical, which is a very rare case, we should not try to suppress it; however, if it be vicarious to another hæmorrhage, for example, to the menstrual or hæmorrhoidal flux, we should try to recall it to its primitive seat.

CUTANEOUS HÆMORRHAGE.

(DIAPYCNOSIS.)

An exhalation of blood through the tissue of the skin is an extremely rare affection. It is, at one time, preceded by heat, tension, and redness in the parts which are to be the seat of the affection; at another time it makes its appearance in indolent spots, of a livid red colour, which permit more or less blood to ooze out. In the greater number of cases, the spots or ecchymosis take place with-

out an effusion of blood, and are most frequently the symptoms of a scorbutic affection.

Treatment.

If this affection be the consequence of an inflammation, whether external or visceral, we must not attempt to arrest it by means of astringent topical applications, which might determine a dangerous repercussion; we must then be satisfied with the employment of the antiphlogistic treatment. If it be owing to a scorbutic affection, we resort to the treatment demanded by this malady. (See Scurvy.)

HÆMORRHAGE OF THE GUMS.

This hæmorrhage may be the effect of a simple inflammation of the gums, and in that case it requires no peculiar treatment, (see gengenitis,) or the result of a scorbutic affection, (see scurvy.)

HÆMORRHAGE OF THE SEROUS MEMBRANES.

(OF THE PERITONÆUM AND OF THE PLEURA.)

The hæmorrhages of the serous membranes are very rare, and their signs so obscure, that for the most part their existence is not discovered until after death. In this place we can only treat of the exhalation of a bloody liquid, occasioned by inflammation, and not of an extravasation of blood produced by a solution of continuity, or furnished by another organ.

Symptoms.

Of Peritoneal Hæmorrhage.—We can to a certain point distinguish between an effusion of blood and ascites, by the fact, that the hæmorrhage is generally very ra-

pid, and consequently the swelling occasioned by it; there are besides intense and sometimes lacerating pains, supervening suddenly; a profound alteration of the physiognomy; coldness of the body; fear of death; delirium; faintness; syncope.

Of Pleuritic Hæmorrhage.—When the effusion takes place in the pleura, it is almost always attended with hæmoptysis; there are also intense pains; an oppression which supervenes rapidly, and is constantly progressive; a dull sound of the thorax over the part corresponding to the effusion; an absence of the murmur of respiration. If effusion occurs in the pericardium, there is orthopnœa; an irregular and unequal pulse; an impossibility of perceiving the motions of the heart under the hand; sometimes general œdema, and bloody sputa. But we repeat, that these signs are very obscure, and many among them are common to other affections.

Causes.

The same as those of the inflammation of the serous membranes that furnish the blood. (See Peritonitis, Pleurisy, and Pericarditis.)

Prognosis.

In the greater number of cases these affections terminate in death. The danger is greater when these hæmorrhages come on in the train of chronic irritations, which have passed to the acute state, than when the membranes have not suffered degeneration from preceding inflammations.

Treatment.

Topical bleeding, sometimes preceded by general, particularly if the inflammation is violent; no stimulants; when the weakness is extreme we employ cold internally

and externally, and apply revulsives to the inferior and superior extremities.

RETENTION, DIMINUTION, OR SUPPRESSION OF PERIODICAL
HÆMORRHAGES.

We have seen that hæmorrhage is often the remedy employed by nature to dissipate an inflammation, and that it does not in reality become a morbid affection, but when it exceeds certain limits. If this hæmorrhage does not take place, and if we do not supply its place artificially, inflammation pursues its ordinary course.

In the same manner, when an organ becomes periodically the seat of congestion, the blood flows, and the congestion is dissipated. If the blood does not flow, it is either because the irritation which had caused the congestion, has risen to the inflammatory degree, or what is more generally the case, because the blood has been drawn to other parts by the inflammation which has been developed there, or finally, because it has found another outlet.

Every month, in young women, the uterus, which enjoys great vital activity, becomes the centre of a sanguineous fluxion: if conception takes place, this exuberance of blood is applied to the end which nature proposes, that is, to the development of the fœtus, of the placenta, and of the womb itself; and during this time there is no hæmorrhage. If there be no impregnation, this blood escapes, and the usual state is restored, until the occurrence of the next congestion, the real explanation of which is to be found in the natural irritability of the uterus. Now, if the woman be affected by a pneumonia, by a gastritis, or another inflammation, the blood in place of flowing towards the womb, will be drawn to the inflamed tissues, and retained in them, and often under these circumstances the menstrual flux will not occur. The same effect may

likewise be produced by the sudden suppression of the transpiration, because in that case the action of the skin repeating itself on the viscera, the blood is turned from its normal course, to throw itself upon the viscera, which are in a state of sur-excitation. The same remarks are applicable to any other cause, which has a tendency to disturb the order of the corporeal functions. When at a more advanced period of life, from the age of forty to fifty, the matrix loses its activity, and its tissues become more condensed, and less irritable, the congestion by degrees ceases to occur, and the menstrual evacuation finally disappears, never to return. What takes place in the case of the menstrual flux, likewise occurs in the hæmorrhoids. It is a way of discharge which rids the body of an overplus of energy, and maintains in it the equilibrium necessary to health. The hæmorrhoidal vessels, like the uterus, become the seat of a periodical congestion: another inflammation may in the same manner prevent this congestion, and the hæmorrhoids may thus be suppressed. We have said in one of the preceding articles, that hæmorrhages, although of the same nature as inflammation, should be regarded as a lower degree of it; according to this principle, hæmorrhage will not occur in acute inflammation of the uterus, and this inflammation will be the cause of the suppression: in like manner acute inflammation may supervene solely on account of the retention of blood, which forms its real aliment.

Besides the hæmorrhoids and the menses, there may exist other habitual hæmorrhages, but these cases are very rare. The same causes produce their suppression.

AMENORRHŒA, OR DYSMENORRHŒA.

When the menstrual flux does not make its appearance in girls at the natural epoch of life, (between the ages of

twelve and sixteen,) we say there is retention of the menses. If they are suppressed by an accidental cause, or if the flow of blood is attended with difficulty, we call this disorder amenorrhœa or dysmenorrhœa. The causes, the symptoms, and the treatment, being the same in these last cases, it is unnecessary to describe them separately.

Symptoms.

The pathognomonic sign is the absence of the hæmorrhage which should take place; but it is accompanied with an infinity of other disorders, which may either accompany each other, or exist in an isolated manner; such are pains in the loins, sense of weight in the lower belly or perinæum; women experience at the ordinary epoch, the same phenomena as though they were about to have their monthly discharge, but the flow does not occur; pruriency of the sexual organs, acute or chronic irritations, having their seats in different parts of the body, in the brain, the lungs, the heart, and particularly the alimentary canal. We recognise these irritations by the signs that are proper to them; sometimes there are symptoms of hysteria, dyspepsia, voracious appetite, or anorexia, depravation of taste, discoloration of the skin, paleness of the lips, general weakness; this constitutes the chlorosis of authors, produced by a chronic gastritis; palpitations, syncope, sometimes a vicarious hæmorrhage supervenes in another part of the body, from the nose, the lungs, the stomach, the anus, the bladder, the gums, and in some rare cases from the eyes, the ears, the breasts, the ends of the fingers, and the surface of ulcers.

Causes.

They may exist in the uterus itself, or what is more frequently the case, in other parts of the body. In the uterus we find acute or chronic inflammation, organic al-

terations, scirrhus, cancer, dropsy, &c. We do not here take into consideration the state of pregnancy, or of suckling, which are natural and not morbid causes of the suppression of the menses. The other causes are, as we have already seen, affections of different kinds, the seat of which is in other organs, whither the blood is determined; and consequently, every thing that can produce these affections, may be ranked among the causes; sudden cold, a strong moral impression, such as sudden alarm, disagreeable intelligence, shame, anger, &c.; the immersion of the feet or the hands in cold, and even, in the case of some women, in warm water, the want of exercise, &c. the abuse of internal stimulants. In a word, amenorrhœa being considered in the greater number of cases as the result of an irritation in another part, may be occasioned by all the common causes of inflammation.

Treatment.

When the amenorrhœa is occasioned by an inflammation, for example, by an acute or chronic pneumonia or gastritis, we must calm these irritations by the appropriate modes of treatment, and the hæmorrhage will almost always reappear. We see that in the greater number of cases the treatment of amenorrhœa is nothing more than that of the disease which is the cause of it. By this, however, it is not to be understood that we are to neglect to recall the suppressed evacuation, for in occasioning a return of the blood to its natural emunctory, we are at the same time calming the irritation which is drawing it to another point, or retaining it there.

The means most conducive to this end are running, dancing, riding, if the person can practice it, warm bathing of the parts, warm fomentations and cataplasms to the lower belly, electricity directed to the sexual organs, laxative lavements, leeches to the perinæum or the vulva, to

the number of ten or fifteen every month, until the flow be re-established, and above all, coition, if circumstances do not forbid; we must except the case in which the womb itself is the seat of an inflammation, whether acute or chronic.

With regard to emmenagogues, the substances to which we give this name are irritants or stimulants, sometimes of a very energetic character, and, as in a great number of cases amenorrhœa is co-existent with an irritation of the digestive tube, these substances augment this irritation, or give rise to it when it does not already exist. Moreover, do not stimulants received into the intestinal canal, always augment irritations seated in organs even at a distance, whenever they fail in operating a revulsion? And if they augment them, how shall they cure amenorrhœa, of which these irritations are the true causes? Furthermore, experience perfectly confirms this theory, and there are few except physicians destitute both of theoretical and experimental knowledge, who behold in emmenagogues the specifics of amenorrhœa.

It is not, however, intended to assert that stimulants should be entirely banished from the treatment, but the first care of the physician should be to combat the inflammation of the head, of the chest, of the intestinal canal, of the liver, of the kidneys, of the womb, &c. and it is only after having triumphed over the inflammation, or having much reduced it, that it is allowable to have recourse to saffron, to iodine, to the preparations of iron, to rue, to procure the return of the hæmorrhage. It must not be forgotten, that if these stimulants have a special action upon the uterus and determine congestion there, they are far from being without action on the digestive tube which receives them, and which is itself, in the greater number of cases, the seat of the irritation which causes amenorrhœa.

DEFINITIVE SUPPRESSION OF THE MENSES.

In our climates the menstrual flow ceases about the age of forty-five, sometimes earlier and sometimes later. Ordinarily this cessation takes place without a derangement of health, but it sometimes happens that the blood not finding its usual outlet, throws itself upon other organs. When this accident occurs, we always observe that the organs which become the seats of congestion, are those which have been most excited, most irritated, and the most frequently inflamed in the course of the life. Thus it is the liver and the digestive canal that are affected in women addicted to good cheer and to spirituous liquors; the lungs in those who have been often affected with cough, catarrh, or other bronchial or pulmonary irritations; an aneurism may supervene in those whose hearts have been subject to palpitations; cerebral affections, more or less grave, in those whose brain has been excited by grief, study, or any other cause; the uterus itself may become the seat of an inflammation, or of an engorgement, which may degenerate into scirrhus, cancer, &c. These and other accidents have occasioned the name of the critical age to be applied to the definitive suppression of the menses. When the blood is shared equally among all the parts, the health of the woman becomes firmer, and if she is of a soft lymphatic constitution, there sometimes results a plethora or an excessive *embonpoint*.

In general the cessation of the menses should come about by the progressive decrease of the quantity of the discharge, by the intervals between the customary periods becoming greater and greater. Sometimes, however, in place of disappearing gradually, they cease suddenly, and are replaced during some time by a uterine catarrh, by

perspirations more or less abundant, or by some one of the disorders we have enumerated.

When the menses are suppressed without accident, the physician has only to counsel the patient to attend to the laws of hygiene: but should the health be disturbed by the suppression, we must examine whether there be any organ in a state of inflammation, or irritation, and when we have ascertained the existence and seat of the irritation, we must attack it by suitable means; we must likewise supply the place of the menstrual evacuations, until the system be habituated to the suppression, by local bleedings at the perinæum, the anus, or the vulva, and we shall take care that the abstraction of blood correspond with the menstrual periods. General bleeding should likewise, in some cases, be employed, according to the seat and intensity of the inflammation which may be developed: in certain cases recourse should be had to revulsives, more frequently external than internal, and if the case requires it, we may establish an issue. A mild and moderate milk or vegetable diet, abstinence from stimulants, a country residence, and muscular exercises contribute to the preservation of the strength, to re-establish it when interrupted, and to prevent plethora, and too great a degree of *embonpoint*. The woman should in the mean time avoid all the causes of excitement, which might act upon an organ affected with inflammation, or disposed to become so; such are frequent venereal indulgence, violent passions, and every thing that can prevent the movement of the blood towards the periphery of the body, crowd it upon the viscera, and create congestion in them, such as cold, corsets, belts, or other parts of dress worn too tight.

SUPPRESSION OF THE HÆMORRHOIDAL FLUX.

Although hæmorrhoids do not, like the menses, constitute a normal function, yet when they have become

habitual, their suppression may give rise to affections resembling those which accompany the suppression of the menses, or to speak with greater physiological exactness, this suppression is most frequently the index of an irritation which has drawn the blood to another point. The principle of these suppressions is always identical. The conduct of the physician must therefore be the same as in the preceding cases; that is, he should treat by appropriate means the irritations developed in other parts, recall the evacuation to its primitive seat, or if it be definitively suppressed, supply its place by the application of ten or twelve leeches to the anus, repeated during some days at the ordinary epochs of the flux. Practitioners likewise advise the use of purgatives, and particularly aloes; this substance indeed has a special action upon the rectum, but, as it is very irritating, it should not be employed, except when the alimentary canal is perfectly sound. Galvanic electricity, directed in a suitable manner upon the anus, is not to be condemned as an irritating means, calculated to produce a congestion in this part. If the hæmorrhoids are suppressed without accident, we do not endeavour to re-establish them; but as most of the persons who are subject to them, have at the same time a certain degree of irritation of the digestive organs, which this hæmorrhage tends periodically to dissipate, it follows that even in the most favourable cases, those who are affected with it should avoid irregularities of living, and an abundance of aliment, which would not fail to excite and irritate the mucous membrane of the intestines, or to determine plethora, two circumstances which render the hæmorrhoidal flux necessary in persons predisposed.

NERVOUS IRRITATIONS.

We may say with rigour, that there is nervous irritation every time there is pain, and it appears that in the

majority of cases, the stimulating or irritating causes exert a primary action upon the nervous system, and that it is only through its intermediacy that the irritation reaches the other systems. Thus the exaltation of sensibility is the first symptom of inflammation, and the congestion of blood is afterwards determined. But there are cases in which the nervous centres, or their ramifications are alone or at least specially affected.

In some of these cases, all physicians agree in recognising a perfect identity of the nervous diseases and inflammation, for all the world agree that an encephalitis or a spinitis are a real inflammation of the brain and spinal marrow. But their sentiments diverge when the signs of irritation are less prominent. Yet we are naturally led to range these maladies in the class of irritations, or, if the expression be preferred, of sur-excitations; first, because they are ordinarily developed under the influence of the same causes as inflammation; secondly, because they often yield to the antiphlogistic and revulsive treatment; thirdly, because they may succeed another mode of irritation, or an inflammation, or an hæmorrhagy, and *vice versâ*; fourthly, because the phenomena which we call nervous, evidently indicate a state of sur-excitation; and if there are symptoms of debility, this debility is often but apparent, and the result of an oppression of the vital forces, depending upon an inflammatory congestion, or an organic alteration, the effect of congestion, such as apoplexy and palsy; fifthly, because dissection has demonstrated that in a very great number of cases of neurosis and neuralgia, or of maladies considered such, the organic disorders were of the same nature as those which result from any other inflammation, and if, in some cases, these derangements of structure have not been met with, we should nevertheless ascend by analogy from a similarity of facts to a similarity of causes. The nature of nervous affections

being given, it only remains to determine their seats; now in proceeding analytically, as has been done with regard to fevers, we discover with regard to these irritations, these acute or chronic nervous affections, as well as the organic alterations which they produce, or which determine them:

First. That they have their seats in the nervous centres; the brain and the spinal marrow, (encephalitis and spinitis.)

Secondly. That they may be confined to one only, or to several of the nerves of sensation and locomotion, without the intervention of any cerebral or spinal affection; this is what occurs when the inflammation or the disorganization attacks exclusively these nervous branches, or when these nerves, either in their course or at their origin, plunge into a focus of inflammation; such are often cases of neuralgia, of partial palsies, certain lesions of the sense of sight, of hearing, of taste, or of smell.

Thirdly. That the irritations of the pectoral or abdominal viscera, often derange the functions of the nerves which they receive, whether from the grand sympathetic or from the pneumogastric, and give rise to neuroses affecting the functions of organic life, in the same manner as disorders of the brain and spinal marrow produce disturbance of the functions of the nerves which depend upon them, and give rise to neuroses, which may be denominated neuroses of relation. These neuroses manifest themselves in a thousand manners, according to the nature of the diseased organ, its structural alteration, and individual irritability; thus, there are sometimes palpitations of the heart, on account of an inflammation of this organ, or of an obstacle to the circulation of the blood; at other times patients experience suffocation, attacks of asthma, of hooping-cough, of the disease called angina pectoris, occasioned by an irritation of the respiratory organs, or of the

heart, or of these two viscera simultaneously. A chronic irritation of the digestive tube in an irritable subject, may occasion the formation of gas, a sensation of constriction, symptoms of hypochondriasis, &c.; the irritation of the womb gives rise in delicate women to the phenomena of hysteria, &c.

As the irritation of the nervous centres extends its influence over all the branches, so likewise the local irritation of one or more nervous branches may react upon these centres; there then result phenomena similar to those we observe in the primitive irritations of these same centres; it is thus that an epilepsy may be determined by a puncture, a laceration, or a contusion of a nerve situated at a distance from the spinal marrow, because this local irritation reacts upon the spinal nervous mass; it is in this manner, likewise, that a lesion, or a mechanical compression of a nerve of the hand, of the foot, &c. may give rise to an attack of epilepsy, because this irritation reacts upon the brain, which then induces the whole series of phenomena which constitute epilepsy. The irritation of the viscera also in certain cases produces an intervention of the actions of the nervous centres; it is thus that the chest agitates itself convulsively to satisfy the want of respiration, of coughing, of sneezing, in the attacks of asthma, of hooping-cough, &c.; it is thus too that the muscles of the abdomen relax or contract themselves to follow the variations of the intestines, when the irritation of which they are the seat produces tumefaction or constriction, fixed or moveable pains. In these cases, and in others analogous to them, the brain is solicited by the visceral suffering, and the will is compelled to succour the diseased organs, in abandoning to them the action of the muscles of which they have need. It may then happen that the nerves of relation lend their assistance in many irritations, without either their own participation, or that

of the brain, in this irritation; that is, there may exist, and there do really exist, convulsions and spasms, although the brain and the nerves, subject to its influence, are in a state of perfect integrity. We readily conceive, that the more irritable individuals are, the more readily will the diseases of the viscera occasion a consenting action of the other parts, on account of the facility with which the impressions they experience repeat themselves upon the sensitive centre. In individuals endowed with great mobility, and who on this account are called nervous, neuroses may occur without the intermediacy of irritated organs, and by the effect alone of a passing excitation of the nervous centre. The sense of suffering produced by a diseased organ, may be instantaneously produced by any other cause acting directly upon the brain: it is thus that a powerful emotion, a strong odour, the sight of an object which gratifies or offends, may determine a nervous attack. This is observed particularly in persons in whom visceral suffering has often awaked nervous sensibility, which sensibility afterwards responds to the action of a great number of causes besides those derived from the organ, which forms as it were the point of departure. But the train of events is not always as we have just described it; in a very great number of cases, the inflammation of the viscera determines that of the brain, and in these cases the cerebral neuroses are associated with those of the viscera. These phenomena occur principally in irritations of the abdominal viscera. In the case of the acute stages, authors do not give the name of nervous affections to the group of symptoms which result from this association of visceral and cerebral irritation, but we have what they denominate malignant, ataxic, adynamic, and cerebral fevers. As the ancients were mistaken with regard to these fevers, so likewise they have been in error with respect to the nature of these pretended neuroses produced by the chronic irri-

tation of the same organs; the whole difference consists in the greater violence of the nervous symptoms in the acute than in the chronic state; but in both cases, it is always an irritated organ that disturbs the others; in hypochondriasis, the digestive organs are the source of derangement; in hysteria, the uterus; in asthma, the organs of respiration; in palpitations, the heart, &c. This disorder, this cry of the organs, is repeated in the brain, which receives the irritation, and transmits it by the nerves to the muscles, where it manifests itself by convulsions, faintings, &c.

All that has been hitherto said, tends to demonstrate that the diseases called nervous are referable to the same causes as other maladies; that their nature is identical; that is, that they depend upon an excitation, an irritation, or an inflammation, affecting in some cases a nervous centre, in other cases, one or more of its ramifications; in other cases they depend upon the inflammation of one or more viscera, acting upon the nervous centres, with a degree of intensity proportioned to the mobility and irritability of constitution possessed by the individual.

The mobility of the neuroses has been objected to this theory; but fixity of seat is not a distinctive character of inflammation. Erysipelas, ophthalmia, articular affections, the inflammatory nature of which no one pretends to doubt, are often displaced with the greatest facility. The intermittent character of the pain ordinarily observed in nervous affections, has no greater tendency to disprove the preceding prepositions. It is not essential to inflammation that it be continued; most of our functions are performed with a species of intermittence in their normal order; such are menstruation, and some other sanguineous evacuations, sleep, the desire to eat, and to pass the urine and fæces; many maladies evidently inflammatory, congestions, &c. appear in an intermittent or remittent form. Why should

not the same be the case in nervous inflammations and irritations?

GENERAL VIEW OF THE TREATMENT OF NERVOUS IRRITATIONS.

It follows from these principles, of the grounds of which the limits of this work do not permit us to make a more detailed exposition, that when the physician has to treat an affection of the kind they denominate, whether rightly or wrongly, nervous, it is proper for him first to assure himself of the seat of the inflammation, and when that has been ascertained, to treat it by appropriate means. Should the irritated organ, or tissue, or the diseased part into which the nerve plunges, be in a true state of inflammation, we treat the disease with emollients, local, or even general blood-letting, the warm bath, in one word, with a regimen decidedly antiphlogistic, as in inflammations without neurosis. Should the irritation not have reached the degree of inflammation, we still employ the same means, but we abstract blood less freely.

When, by means of this treatment, we have diminished the state of inflammation, or of irritation, revulsives may be employed with success.

It often happens that the local irritation being destroyed, there remains to be corrected a convulsive habit which survives it. This may be combated by certain stimulants which they call antispasmodics, such as ether, camphor, musk, opium, assafoetida, valerian, zinc, &c. but it is proper to add that these means are rarely of permanent or decisive utility; that most frequently they only palliate the evil by producing a sur-excitation and perhaps a temporary revulsion; that they often augment it; in fine, that after antiphlogistics and revulsives, the most efficacious means, in a great number of cases, are muscular exercise,

amusement, travelling, and the exertion of the will, which alone is sometimes sufficient to resist what they call nervous attacks. In compelling the muscles to act under the influence of the will, we throw upon them the excess of vitality which torments the nervous system, we render it less sensible to the stimulation of the viscera; we augment digestion, nutrition, and the depuration of the blood, at the same time that we reduce the nervous activity; for the more an individual expends of his activity in voluntary movements, the less has he remaining for the sensations and involuntary movements; by exercise the constitution becomes stronger and affords less opportunity of making an impression to the causes that tend to create this troublesome sensibility, upon which depends a number of neuroses.

If, as it sometimes happens, paralysis succeeds the nervous sur-excitation or irritation, stimulating remedies, such as friction, douching, blisters, the application of fire, cups, electricity, acupuncture, and electropuncturation, &c. are suitable upon the parts which have lost motion and sensibility; but if the paralysis depends upon a lesion of the nervous centres, every kind of medication, directed to the nervous branches, will be completely thrown away. Besides this, we know that these disorganizations, whether cerebral or spinal, the results of preceding inflammation, consist in softening, suppuration, compression, or induration; now, if these disorders have no great extent, nature works their cure: it is therefore our part to favour her efforts, and not to interfere with her operations, by irritating the brain and provoking a new effusion, a new congestion, or a new inflammation in the tissues which were disposed to become healthy. The best practice under these circumstances, is to employ no internal irritant, to put the patient upon a light regimen, which may sustain him, without causing sur-excitation,

to enjoin abstinence from intellectual labour, to make him take the fresh air, seconded by exercise proportioned to his remaining strength. In paralytics whom apoplexy has spared, it is a good plan to resort to a general abstraction of blood from time to time, to prevent the recurrence of congestion; revulsives are still suitable after the antiphlogistic treatment, in the acute or chronic inflammations that threaten the disorganization of the nervous trunk; thus we apply the moxa, cups, the needles, &c. over the course of the sciatic nerve in nervous sciatica; to the arm, to the forearm, to the temples, and so forth, in neuralgia of these different regions.

It is extremely uncommon to meet with affections purely nervous. In the great majority of cases they are complicated with inflammation or lesion of some neighbouring tissue.

Does the sur-excitation of the nerves and of the muscular system placed under their dominion, and the state of collapse which very often succeeds, depend upon the accumulation of the nervous fluid in certain points, on the restoration of the equilibrium of this fluid, and upon its subtraction? Many facts would incline us to answer this question affirmatively; but in the actual state of our knowledge it is not possible to assert it as a demonstrated proposition. Whatever may be the fact, the influence of electricity upon the nervous system, as well atmospheric as that produced by the machine, cannot be questioned.

AFFECTIONS OF THE NERVOUS CENTRES.

IRRITATIONS OF THE BRAIN AND ITS ENVELOPES.

(*Encephalitis, Meningitis or Phrenitis, Gastro-cerebritis, Apoplexy, Paralysis, Epilepsy, Catalepsy, Cephalalgia, Mental Alienations, Nostalgia, &c.*)

An acquaintance with cerebral irritations is very important, on account of the part which the encephalon performs in the organic economy, and because it is the centre of the intellectual functions, the director and excitor of innervation.

The irritations of the brain may assume forms extremely varied, which for a long time were regarded as affections *sui generis*; but when we reflect that these diverse forms depend only on the intensity of the irritation, on its seat, occupying either the whole encephalic mass, or the meninges, or some parts of the cerebral pulp, upon extravasations, sanguineous or otherwise, upon organic alterations resulting from them, upon diverse complications of this irritation with that of other viscera, &c. it is impossible to admit this long and useless nomenclature of cerebral maladies, with which authors have surcharged their nosological tables.

Cerebral irritations are acute or chronic. Although it is not always easy to trace the line of demarcation between these different states, although the passage from the one to the other is a very frequent occurrence, and although there are between extreme acuteness and chronicity, many intermediate degrees of irritation, yet we shall admit this division as being the most simple.

ACUTE CEREBRAL IRRITATIONS.

ENCEPHALITIS AND ARACHNITIS.

Symptoms.

Pains more or less acute in one or more points of the cranium, ordinarily fixed about the forehead and occiput; lancinating, if the inflammation occupies the meninges; dull, undefined, profound, if the cerebral mass be the seat of it; pulsation of the carotid arteries; burning heat of the skin; eyes animated, projecting, suffused; dilatation and immobility of the pupil; fixed aspect, dull or ferocious. To these local symptoms others are added, if the irritation rises to a very high degree. There is delirium, which may even become furious; vertigo; terrifying dreams, such as the sight of flames, precipices, monsters, &c. There are sometimes convulsions; tetanus; *subsultus tendinum*; cold of the extremities; cold sweats, or pungent heat of the skin. Considerable exaltation of muscular energy; menacing aspect; this is the ardent fever of authors. It is rarely the case, that encephalitis pursues its course alone; most frequently gastritis precedes it, or develops itself under its influence: either of these two irritations may be sympathetic of the other, according to the order in which they succeed each other. If the gastric affection predominates, the irritation of the brain, instead of manifesting itself by symptoms of augmented vital force, is accompanied by prostration: this is the adynamic or *ataxic* fever. If this irritation does not continue sufficiently long to produce disorganization before the fatal termination, this malady is ranked, but incorrectly, in the number of essential diseases. Nervous phenomena, such as frenzy, delirium, convulsions, in one word, exaltation of all the cerebral functions, are always signs of inflammation of the brain, or of its envelopes. If the phlogosis

lasts but a short time, it carries off the patient, without producing profound organic lesions; but, notwithstanding the absence of these lesions, the malady is not more essential in the one case than in the other. Arachnitis may often be confounded with cerebritis, but this error is of no consequence in a practical point of view, for the plan of treatment is absolutely the same in the two cases.

Causes.

Irritation often arrives at the brain through the membranes that form its envelope; at other times, it is the sequel to irritation of the neighbouring parts; thus inflammation of the ear, of the eyes, of the nasal cavities, of the integuments of the head, may extend to the brain; this phenomenon of extension is common to all the phlegmasiæ. It is also determined by sympathy. No organs have a more intimate relation to each other than the brain and the stomach; it is on this account that gastritis develops with so much facility inflammation of the brain, and that, if a moral influence, or any other cause acting directly on the brain produces a meningitis, or a cerebritis, however slight may be its intensity, this irritation repeats itself always upon the digestive organs: whence it follows that all the direct causes of gastritis may give rise to cerebral irritations, and *vice versâ*. We have spoken in another place of the causes of gastritis; we shall not repeat them here. The direct excitants of the brain, and consequently the direct causes of encephalitis, are, intellectual labour, violent passions, prolonged watching, insolation, exposure of the head to a heat too intense, external violence, certain obstacles to the circulation of the blood, particularly tight cravats, the sudden suppression of a hæmorrhage or an issue.

Prognosis.

Acute arachnitis often terminates at the end of the fifth

or sixth day, by a sero-purulent secretion on the surface of the arachnoid, and rarely by a complete resolution. The course of acute encephalitis is slower, and does not terminate often until between the eleventh and twentieth day, seldom also by complete resolution, but by passing into the chronic state, which may assume a variety of forms, as we shall presently see, according to the diversity of lesions produced.

Treatment.

Blood-letting here stands first, and should be employed from the commencement of the disease. If profound *adynamy* or *ataxy* exists, the abstraction of blood will prove injurious. We must abstract blood from the foot, and repeat the operation more or less frequently, in preference to bleeding from the arm, experience having demonstrated that this is the more efficacious mode of producing a depletion of the brain. We may have recourse to arteriotomy, to bleeding from the veins of the mucous membrane of the nose, either by means of two or three leeches, or by opening a nasal vein with the instrument of M. Cruveilhier; the application of a great number of leeches to the neck, to the temples, and behind the ears. It is very important to be assured of the point of departure of the inflammation. If it be the effect of a gastritis, we apply leeches to the pit of the stomach. Silence and the exclusion of great light; cool temperature; temperant drinks; laxative lavements; severe diet; an elevated position of the head.

Should iced applications be employed? Some practitioners condemn them, others recommend them in every case. The cause of this difference of opinion depends on the fact that physicians have not discriminated between the cases in which this means is useful, and those in which it is injurious, confounding

the constitutions of patients and the stages of the disease; it depends in part also on their neglecting the precautions which the application of ice renders necessary, and especially their not taking into consideration the length of time the ice should remain upon the head. Experience has taught that the application of ice is injurious in individuals who are weak, cachectic, with feeble powers of reaction, and prostrated by the duration of the malady; in infants whose fontanelles are not yet ossified, and who are of a lymphatic or scrofulous constitution. It is hurtful when the inflammation is of many days standing, when there exists signs of effusion, of softening, or of suppuration. It is, on the contrary, of the greatest advantage in robust subjects of a good constitution, and when the malady is commencing; but to secure its good effects, we must permit it to remain a long time on the head, with the view of preventing the reaction which always succeeds sedation, and which occurs every time we remove it. Its application should then be continued until this reaction no longer occurs; this is not the case until nearly all the cerebral symptoms have disappeared.

We must not neglect revulsives, such as sinapisms to the lower extremities, pediluvia and maniluvia, rendered stimulating by mustard.

SUB-ACUTE AND CHRONIC CEREBRAL IRRITATIONS.

Acute inflammation of the brain may affect the whole encephalic mass, the meninges, or only some circumscribed part of the cerebral substance. The same is the case with the sub-acute and chronic inflammations, but their forms are varied to such a degree that it would be impossible to describe them all. In general the organic symptoms are few in number, and are most frequently limited to acute pains in the head, which are local, circumscribed,

sometimes general, to vertigo, &c. The sympathetic symptoms consist in the depravation of the digestive process, in the loss of a sense, in an exaltation of sensibility in an eye or an ear, in the convulsion or palsy of an arm, of a leg, of one side of the body, in pains of the muscles, &c. The integrity of the digestive functions may, however, continue, notwithstanding these symptoms; but if a gastritis supervenes, these functions will be deranged.

In other cases there is aberration of the mental faculties. These aberrations may exist in diverse degrees, the first of which is delirium; this differs from mania only in intensity; they are not two separate entities. Thus, in acute inflammation, this delirium becomes violent, furious; there is loquacity, and augmentation of muscular strength. In a local phlogosis of the cerebral pulp, particularly if it is chronic, the intellect may long retain its integrity, but in that of the meninges, the intellectual faculties are soon disturbed, and there is mental alienation. It would be difficult to draw a line of demarcation between the cases in which the irritation produces delirium or mania, or only a kind of torpor of the mental faculties. The forms of mental alienation are innumerable, on account of the acute, sub-acute, chronic, general, or circumscribed inflammation which determines them.

The passions have the greatest relation to mental alienation; their existence presupposes the association of cerebral excitation with that of some organ, such as the heart, the stomach, the sexual apparatus. The brain being excited, in its turn excites a given viscus, and this constitutes passion. Blood-letting, however, does not succeed in calming the passions, as it does in simple phlogosis, because this double excitation is ordinarily the result of an intellectual operation. Yet we sometimes see the erotic fury yield to general depletion and to mild regimen.

We have said that there existed between the stomach and the brain such relations that the irritation of the one is always repeated in the other; this is observed in many cases of mental alienation. Religious, amorous, nostalgic, and other cases of delirium, are almost always accompanied with an irritation of the digestive organs. All these forms of cerebral irritation, from having been sub-acute, may become acute, rise even to a state of frenzy, and thence to apoplexy and paralysis; but these are not maladies of a distinct nature. Diminution of intelligence precedes or follows apoplexy, encephalitis, and cephalalgia, as in the case of any other cerebral irritation. In all these cases there is disorder of the locomotive or intellectual faculties, or of these two faculties simultaneously. Madness is gay, sad, or furious, according to the temperament of the individual, and according to the precise seat and the intensity of the cerebral excitation. Those who are affected with sad and gloomy ideas, who imagine the infernal regions open beneath their feet, &c. are ordinarily sufferers from a gastro-cerebral irritation; the inclination to commit suicide is often an index of this irritation, and, although all suicides are not invalids or fools, many among them have the brain and digestive passages in a state of sur-excitation. Nostalgia, as we have already said, depends also on a similar irritation. It is true that a moral affection ordinarily precedes this irritation; but this moral affection is a stimulant to the brain; finally, this organ becomes irritated, and the irritation exalting the sensibility of the seat of the idea which occupies the mind, this idea is incessantly represented, and causes an oblivion of all others. This appears to be the real cause why one individual is mad upon one particular point, and another upon a different one, in one word, the cause of monomania. Thus we observe a progressive failing of the understanding, and sometimes a gradual extinction of the passions.

Whether we admit or not the doctrine of Gall, these observations, which are, moreover, confirmed by dissections, remain unshaken.

Intermittent irritations of the brain often succeed the continued, although they may be primitive. Of this kind are epilepsy, certain cephalalgies, catalepsy, or exstacy. Catalepsy is most frequently met with in devotees, whose imaginations always excited, represent to them the joys of paradise, and bring to their ears the music of celestial choirs, &c. Although in this affection all the parts of the body are deprived of sensation and motion, and the limbs retain the position that is given to them, the sole of the foot sometimes retains much sensibility. This malady cannot find a place except among cerebral excitations.

In epilepsy muscular movement is not extinct, but the sensitive faculties are suspended, and all the members are agitated with violent convulsions; the face is of a deep red colour, the mouth foaming, the respiration laborious. The attack having terminated, the patient remains for some time in a state of weakness and stupor, and gradually returns to his natural state. Fright is the most frequent cause of it; then follows excessive venery, particularly at an early age; the suppression of an habitual evacuation; the presence of a foreign body; intestinal worms; the compression or laceration of a nerve, even at a point very remote from the brain. In this case it is the local irritation that awakes that of the brain. Epilepsy, as all other forms of cerebral irritation already mentioned, may be primitive or consecutive. Do we wish a proof that this malady is the effect of a cerebral irritation? We have it in the fact, that after some time it leads to mania, idiocy, to apoplexy, or is consecutive to these affections.

Cephalalgia or head-ache is sometimes continued, but most frequently periodical. We observe it to supervene under the influence of moral causes, of depressing passions,

and of all the excitants of the brain, of chronic gastritis, of the suppression or cessation of the menses, of hæmorrhoids, &c. Irritable brains are more subject to it than others. Cephalalgia may pass from the periodical to the continued form, then to acute encephalitis, to apoplexy, or it may succeed these affections; it is then only a cerebral irritation, which is exasperated and becomes sensible at intervals; to make of it a malady *sui generis*, would be an absurdity. Whatever may be the alterations of the brain, induration, softening, suppuration, sanguineous, or serous effusions, and whatever may be the remote disorders which result from these alterations, we must always recognise as their cause, irritation developed in diverse degrees in different subjects, in different parts or tissues.

It often happens that chronic cerebral irritation rises suddenly to the acute state, or to apoplexy, and causes death. On dissection we then always find an effusion of blood under the meninges, or in the cavity of the ventricles, or even in the parenchyma of the brain. (See Apoplexy or Cerebral Hæmorrhagy.)

If apoplexy does not occasion death, it is almost always followed by palsy, or by convulsive movements, or by impairment or disturbance of the intellectual faculties, affections which in their turn often lead to apoplexy. It has been asserted that the alterations of the brain, which give rise to paralysis, are ordinarily found on the side opposite the paralyzed members; this assertion is contradicted by other observers; but this is of little importance in practice; it is in fact sufficient to know, that according as the effusions occur in one part or in another, there will result from it a partial palsy, or partial convulsions, or finally, apoplexy; that all these affections are of the same nature, and that primitive or consecutive apoplexy, no more than the paralysis that precedes or follows it, is a malady *sui generis*.

After having classed together, under the same point of view, the different forms of chronic cerebral irritation, it is now proper to speak of their treatment.

Treatment.

First, the removal of the occasional causes. In all cases of a sub-acute character, the treatment should be antiphlogistic: the palsies and partial convulsions which are connected with a state of cerebral irritation, yield always more easily to this treatment, and to blood-letting, than to nervines. The abstraction of blood in the meantime is occasionally necessary to prevent cerebral congestion, which might occasion apoplexy. It is essential to recall to their primitive seats suppressed evacuations, by means of the application of leeches at the ordinary periods of these evacuations. This last practice is important, whatever may be the external symptoms of cerebral irritation, palsy, tremblings, cephalalgia, epilepsy, madness, &c. If there is irritation of the alimentary canal, we pursue the treatment directed in such cases. We also have recourse to revulsives, after the employment of the antiphlogistic treatment and regimen: thus, we may place a blister on the back of the neck, and obviate constipation by means of emollient lavements, or drinks slightly laxative. We must not lose sight of the fact, that a great number of chronic irritations of the brain, being accompanied by serious alterations of its substance, physical and moral repose are the surest means of procuring the re-absorptions and cicatrizations necessary to obtain a perfect cure.

In mental alienations, we must first observe the cause of these maladies. The cerebral excitation, produced by study, devotion, love, the recollections of home, should be treated by diversions, and sometimes by a compliance with the desires of the monomaniac; and if the irritation rise to the inflammatory degree, if there be furious deli-

rium, and if the individual be robust and plethoric, we have recourse to blood-letting, and are guided in the repetition of it by the intensity of the cerebral phenomena. We must be careful not to exasperate the irritation, by contradicting maniacal patients. In many of these cases, the warm bath, with cold affusions on the head during its employment, may be useful, if the patient submits to the treatment with docility; if he resists, we should not insist upon it, lest we augment the cerebral excitation.

In the periodical irritations of the brain, we particularly examine into the causes which produce them and keep them up. We shall call to mind, that in epilepsy it is very possible for this cause to be seated in a point remote from the brain, which in this case will only be irritated in a secondary manner. If then we ascertain the existence of worms, we cause their evacuation; we remove the compression of a nervous trunk; we extract splinters of bone, or other foreign matters, if they exist; the local or remote inflammation is to be combated by antiphlogistics and local blood-letting; plethora, by general depletion.

It may happen, that after having combated the irritation by blood-letting, and other antiphlogistic means, and even after having removed the causes, the brain still retains the habit of intermittent irritation: in this case we resort to diverse agents which modify the sensibility of the nervous system, or interrupt the periodicity of the irritation: of this kind are the antispasmodics, such as assafoetida, valerian, camphor, the ammoniated copper, hydrocyanic acid, &c. The sulphate of quinine, either alone, or in combination with these substances, has produced the most happy results. We commence by administering them in small doses, and gradually increase the quantity, or the frequency of repetition, carefully observing the state of the alimentary canal. These medicines are given in the interval of the attacks. The nitrate of silver in

curing the epilepsy always produces a gastritis, which is in every case dangerous; it has been discarded. Epilepsy is one of the most difficult affections to cure; yet local and general blood-letting at first, and afterwards antiphlogistics and quinine, produce cures in a great number of cases. In these obstinate cases, we add to the other means the employment of revulsives, such as blisters and sinapisms, which we apply successively to different parts of the body. During the attack, we should keep all powerful odours and all stimulants from the patient. When epilepsy is occasioned by a lesion remote from the brain, as the compression of a nerve in the finger, the access is ordinarily announced by what is denominated the *aura epileptica*, and we can often prevent it by immediately placing a ligature upon the limb, between the point of departure and the brain.

Catalepsy always demands a stimulating treatment, as well externally as internally; this has been demonstrated by experience. Cephalalgia or head-ache has often been successfully treated by quinine, administered during the absence of the attack; but we must suspend its employment, if there exist or supervene signs of irritation of the digestive organs. There are practitioners who recommend the employment of opium, of emetics, of coffee, &c. during the attack; but we can never calculate with certainty upon the effect of these substances, which are sometimes hurtful, and sometimes beneficial: the best course to pursue then, is to keep the patient perfectly quiet, and to avoid light and noise. In women whose courses are irregular, should suppression of this evacuation occur, we should recall it by the employment of leeches, with the view of preventing cerebral congestion, or the organic alterations, with which persons affected with obstinate cephalalgies are always threatened. The same precept is applicable to individuals in whom the hæmorrhoids are suppressed; and

even in persons who have never been subject to them, it would be very advantageous to establish a point of fluxion about the anus. The complications of gastritis, which exist almost always, should be combated by the ordinary means; revulsives, such as a large blister, an issue, a seton in the back of the neck, are also of great advantage in cephalalgia, as in most of the chronic cerebral affections.

In cases in which chronic irritation returns to an acute state, the treatment should again be decidedly antiphlogistic.

ACUTE ARACHNITIS OF INFANTS.

(ACUTE HYDROCEPHALUS OF AUTHORS.)

Symptoms.

We have confounded in the preceding article, encephalitis with meningitis, not because it is absolutely impossible to distinguish them, but because this distinction is useless in a therapeutic point of view. Meningitis or arachnitis in infants requires a particular description.

First Period.—At the commencement of the malady the patient is sad, agitated, dejected, tormented with acute head-ache, which it refers to the forehead, to the vertex, or to the occiput. This head-ache commences with remarkable somnolency; it is continued, but it becomes more acute by attacks of short duration, which sometimes draw from the infant cries altogether peculiar. After these cries, the infant falls again into its state of dejection and somnolency, it sometimes grinds its teeth and chews as though it had threads in its mouth. It only rouses itself from its stupor to complain, and sometimes to rave. Motion increases the cerebral pain; the head is heavy, and falls backwards, or upon the shoulders; the *facies* bears the impress of pain; the child has itchiness of the nose, starts suddenly out of sleep, is affected with strabismus, dilatation or constriction

of the pupil, occlusion, almost permanent, of the eyelids, occasioned by the great sensibility of the eyes to light; sometimes efforts to vomit, obstinate constipation, and if in some rare cases there is a looseness, it is owing to a complication of entero-colitis; the urine is scanty and contains a sediment; alternation of flushing and paleness of the face; the pulse more frequent than in health, most frequently accompanied with a slow and irregular respiration.

Second Period.—Augmentation of all the preceding phenomena, and particularly of the nervous symptoms; convulsive agitation of the muscles of the face and of the limbs; the head-ache is more acute; the heat of the head is very great, and is accompanied with frequent and irregular flushings of the face; the pulsations of the arteries, before accelerated, now diminish in frequency, and are irregular, and this irregularity coincides ordinarily with very unequal respiration; the patient often raises his hands towards his head; the strabismus increases; the pupils, dilated or contracted, oscillate in a remarkable manner; the eyes are insensible to the light; the somnolency is profound and continual; the vomitings cease ordinarily towards the end of this stage, which is the longest one of the disease.

Third Period.—When this series of phenomena has continued during ten or fifteen days, the head-ache seems to have ceased entirely, and the infant falls into a profound coma, which is disturbed only by the grinding of the teeth, and convulsions of the face and muscles. The pulse becomes regular again, but is to a very extraordinary degree weak and frequent; the eyelids are half-closed, the ball of the eye is turned upwards; the respiration is slow and stertorous; cold sweats; cold extremities; death.

Sometimes the patient is carried off by the convulsions, before having passed through all these stages.

Causes.

Hitherto authors have given to this malady the name of hydrocephalus, on account of the sero-purulent collections which they have found after death; but this is to take the effect for the cause. This malady consists in an inflammation of the meninges, and especially of the arachnoides. It is not a question of great importance to the physician, whether the seat of this disease be in the membranes which cover the convexity of the brain, as happens generally in adults, or whether it be seated in those of the base and ventricles, as is frequently observed in infants: it is sufficient to know that there is inflammation of the envelopes of the brain, that this inflammation very often extends to those of the spinal marrow, and that consequently all the causes of cerebral irritations may determine it; such are difficult dentition, worms, falls, and blows upon the head, insolation, the repercussion of a cutaneous eruption, the sympathy of the cerebral organs brought into play by a gastritis or other visceral inflammation. Certain climates, and perhaps certain hereditary organic predispositions, favour its development; and to cite but one example, this disease is infinitely more common in Geneva than in Paris. Great energy, and a too rapid growth of the cerebral organs, are certainly predisposing causes of it.

Children from one to ten years of age, among whom inflammations of the cerebral substance are extremely rare, are, on the contrary, more subject than adults to those of the meninges; however, the latter are not exempt from it.

Prognosis.

Always very unfavourable; after the first period the serous effusion occurs, and there scarcely remains any hope.

This disease seldom passes to the chronic state, yet there are some examples of this termination; a head-ache, more or less continued, accompanied with somnolency, convulsive movements, and an impaired state of the intellectual faculties, are the most ordinary signs of it: the symptoms are the same when meningitis is primitively slow in its progress without succeeding the acute state.

Treatment.

It is important to act with promptitude, and upon the appearance of the first symptoms; if this be not done, every mode of treatment will be superfluous. Without dwelling upon the idea of dropsy, which does not yet exist, but which the inflammation is about to determine, we must employ blood-letting much more boldly than it has heretofore been practiced; for if the treatment of this formidable malady is so generally observed to be unsuccessful, it is because the inflammation advances with rapidity, while time is lost at the beginning, in administering calomel, or other medicines, the least objection to which is their inutility, and it is determined at last to bleed, when depletion can no longer have any effect, except to increase the convulsions, and hasten the fatal termination. We must with haste apply a great number of leeches to the temples, over the course of the jugular veins, to the anus, along the spine; this operation must be preceded by general blood-letting; if the infant is large and strong, we repeat the application, until the cerebral phenomena have been dissipated. The head should be covered with compresses, wetted with cold water, and often renewed, while the thoracic and abdominal extremities should be kept hot by compresses, wet with water, rendered slightly stimulating with mustard, but they should not be irritated by strong sinapisms; this irritation almost always reacting upon the brain in infants. Frequent affusions of cold or

iced water, continued during many hours, may be substituted for the cold compresses. The bowels are to be kept in a soluble state by mild laxatives, such as calomel, or by lavements. If this treatment be fully pursued, we shall often arrest the disease in its first period; but if it have reached an advanced epoch of the second stage, and with still greater reason, if it has reached the third stage, we must renounce this treatment, and confine ourselves to the administration of some cooling drinks. Having been placed in a situation where we had an opportunity to observe many patients affected with acute arachnitis, we have never known good effects produced either by blisters upon the head, or by setons in the back of the neck, by sinapisms, or by antispasmodics administered at the close of the second period, and during the third; and therefore why aggravate by these painful means the sufferings of the patient? The trepan, which has been advised, and even tried, with the view of evacuating the fluids, is an absurd mode of treatment; an instantaneous death is always the result.

CONTINUATION OF THE AFFECTIONS OF THE NERVOUS CENTRES.

(MYELITIS AND SPINAL ARACHNITIS.)

We proceed to describe inflammation of the nervous substance of the spinal marrow conjointly with that of its envelopes. The first bears the name of myelitis, and the second that of spinal or rachidian arachnitis: it is acute or chronic.

Symptoms.

The symptoms of these two affections are easily confounded, as those of encephalitis are often confounded with those of meningitis. They may exist simultaneously, or separately.

Acute state. Myelitis.—Pain acute and profound, accompanied with a sense of pungent heat along the spine, exasperated in a very marked manner by movement, sometimes by decubitus on the back, but never by pressure. To this pain, which does not ordinarily exist, except in a part of the vertebral column, is added a state of stupor, accompanied with disagreeable formication in the abdominal members; this stupor is so much the more decided as the progress of the malady is more rapid; a paralysis, more or less complete, of the sphincters of the anus and bladder, manifested by the involuntary excretion of fæcal matters and of the urine. Palsy supervenes in diverse manners; sometimes it pursues an ascending course; it gains, in succession, the superior part of the trunk, the superior members, the pectoral and intercostal muscles, and occasions the cessation of respiration; and death. At other times, but more rarely, palsy pursues an opposite course, and its progress is from above downwards; it may happen that palsy of motion and palsy of sensibility exist separately; these differences depend on the part of the spinal marrow which is the seat of the alteration. In some cases the limbs are at first affected with convulsions, which are afterward succeeded by paralysis; sometimes they exhibit a permanent painful contraction, or they are flabby and without any rigidity. It appears to be demonstrated that convulsions, and particularly permanent contraction of the limbs, are symptoms belonging more peculiarly to arachnitis; flaccidity and paralysis to myelitis. To these accidents proper to myelitis, are sometimes added others less constant in their appearance; such are, at a very high degree of intensity, tetanic spasms, trismus, apoplexy, more or less difficulty of deglutition, aphonia, exalted sensibility of the sight and of the hearing; this last symptom evidently indicates a concomitance of cerebral irritation.

We can ascertain with a certain degree of exactness, the seat of inflammation: if it is the superior region of the spinal marrow, situated near the annular protuberance, there is often furious delirium, trismus, difficult deglutition, paralysis of the whole body, and a rigid death; if it is the cervical portion, there is rapidity of movement in the muscles of the neck, convulsions, paralysis of the superior limbs, laborious respiration; if it is the dorsal portion between the two swellings of the spinal cord, there is, more particularly, convulsive and continued agitation of the trunk, in which the members do not participate, unless the structural change occupies a part of the swellings. When the lumbar portion, or rather the inferior swelling of the spinal marrow, is the seat of inflammation, there is pain confined to the region of the loins, paralysis of the sphincters of the rectum and bladder, as well as of the inferior extremities; sometimes there is satyriasis.

Acute Spinal Arachnitis.—In most cases, the inflammation of the membranous envelopes of the spinal marrow is propagated to that of the brain, or *vice versâ*, so that the symptoms of cerebral and spinal arachnitis are found united. As we have considered the former in the section on encephalitis, we shall not return to it: the symptoms of spinal arachnitis, considered separately, are the same as those of myelitis; we observe in arachnitis, besides the violent pain along the spine, a general contraction of the muscles of the posterior part of the body, which varies from simple muscular rigidity to the most violent contraction, determining retroversion of the head and trunk, as in tetanus.

Causes.

This inflammation is more frequently produced by the influence of external causes, by efforts, punctures, falls,

violent blows upon the spine, insolation during a hot season, alterations of the vertebræ. It rarely arises from an internal cause, yet it may be produced by the recession of a cutaneous eruption, by the extension of a neighbouring inflammation, particularly that of the brain, by the ingestion of certain substances acting in a special manner upon the spinal marrow. Among the causes also are cited the suppression of the menses, of the hæmorrhoids, of an issue, the metastasis of a muscular or arthritic inflammation.

Prognosis.

Most authors regard this phlegmasia as invariably mortal; yet examples of cure are cited. Its course is generally rapid; most frequently the fatal termination occurs from the tenth to the fifteenth day; in some cases from the third to the sixth. M. Ollivier reports a case which proves that this inflammation may be prolonged for the space of nearly thirty days.

Chronic state.—When this affection is chronic, it does not generally occasion any sensations of a very painful kind; twitching of the muscles, palsy of the limbs, disorder of the functions of the bladder and rectum, are the only symptoms that can lead to the suspicion of its existence. These symptoms manifest themselves gradually; there is supineness and languor in the movements, a disposition to inertness, from time to time a deep and dull pain in some point of the spine, pain along the course of the nerves which come from this point, intermission for a longer or shorter time of all these symptoms.

Numerous organic alterations result from this disease. There is induration, '*ramollissement*,' or softening of the nervous substance, atrophy of the parts affected, and sometimes of the whole body; caries of the vertebræ, purulent secretions, the production of abnormal tissues, &c.: whence it follows, that, in a very great number of cases, the dis-

ease is not in the spinal marrow, but in the neighbouring tissues, the cartilages of the vertebræ, and in the vertebræ themselves. This state may continue many years.

Treatment.

It is founded upon the same principles as that of other inflammatory affections. In the acute state we should, from the beginning, have recourse to abundant general blood-letting; afterwards apply a great number of leeches along the whole extent of the vertebral column, and principally upon the point corresponding to the seat of inflammation, cups may very well supply the place of the leeches, frequent warm baths, in which the patient should remain many hours, rigorous diet, cooling and emollient drinks taken in abundance, emollient lavements, mild purgatives, if there is no irritation of the digestive tube. Should we not resort to the prolonged application of ice along the whole extent of the spine, as in acute cerebral inflammations? After blood-letting, repeated with sufficient frequency, we may employ with success irritating local applications, such as the ammoniacal plaster, issues, setons, douches of warm water, and the most absolute rest. When the organic alterations are grave, and the pains become insupportable, we have no resources left but the employment of palliatives to calm them, such as the preparations of opium.

IRRITATIONS OF THE NERVOUS EXPANSIONS.

(NEUROSIS AND NEURALGIA.)

The diseases of the sensitive and locomotive nervous expansions, are at one time an inflammation of the nerves of locomotion and sensation, at another, a simple exaltation of their sensibility.

Many of the neuroses of authors are, as we have seen

above, nothing but a phlegmasia of the encephalon and spinal marrow; such are apoplexy, catalepsy, mania, chorea, many species of paralysis, of tetanus, &c. But as these central irritations react upon remote parts, so do the irritations of the nervous branches react upon the centre, so that the essential matter in practice is to seize distinctly the point of departure.

The large nervous trunks which are not remote from the skin, are often impressed through it: it is thus that cold produces the neuralgia called sciatica, as under other circumstances it produces pleurisy.

Would the word neuralgia then indicate nothing to the practitioner, unless we attach some vague ideas to the pain, as is so frequently done in nervous affections? A nervous trunk suffers because it has been irritated or inflamed under the influence of cold, a fall, a puncture, the incomplete section of a nervous branch, a contusion, the metastasis of another irritation, violent exercise, &c. A neuralgia is always something similar to the sciatica which has just been cited as an example: a neuralgia also is often caused by a nervous branch plunging into a focus of inflammation, into disorganized tissues, or by its being compressed by an osseous or other tumour, &c.

Neuralgia may be divided into as many species as there are nervous branches; but these are always diseases of the same nature. It is upon these principles that authors have established the division of neuralgia into the facial, frontal, sub-orbital, maxillary, dental, nasal, cubito-digital, sciatic or femero-popliteal, femero-prætibial, ileo-sciatal, plantar, &c.

The mentioning of the names of these maladies is sufficient to point out their seats.

Symptoms.

Neuralgia manifests itself by acute pain, lacerating or

lancinating, following the course of the nervous branches, without tension or swelling of the affected part. The neuralgic pain sometimes assumes the character of remission, or of intermission; at other times it is continued; when it is violent, it may determine fever. We call those cases of neuralgia, *vague*, which run in succession over the nervous trunks. The prognosis of neuralgia is difficult to establish, on account of our often finding it impossible to ascertain its causes. Facial neuralgia pursues, in particular, a very variable course: the duration of the attack is from some minutes to some hours; it sometimes resists all the therapeutic means with which we are acquainted. It may terminate in death after having lasted for a period of time varying in duration. Neuralgia, seated in the grand sciatic and in the crural nerves, may be acute or chronic, and last from some days to months and years. We distinguish it from rheumatic pains by the fact that compression diminishes the pain, which is not the case in arthritic or muscular irritations.

Treatment.

If there is fever, or symptoms of irritation of the digestive passages, we commence with antiphlogistics, and pursue the ordinary treatment of the gastro-intestinal affections; if the individual is strong and plethoric, we always commence with a general bleeding, and then resort to topical depletion, by means of leeches or cups. Among the other means employed hitherto against the neuralgic affections, some are empirical, others rational: the empirical, which are not on this account to be neglected, are the antispasmodics, and some other substances, such as opium, camphor, ether, assafoetida, the oxide of bismuth, prussic acid, belladonna, stramonium, the carbonate of iron,

mercurial frictions, and in the cases in which there is periodicity, the sulphate of quinine; lotions, composed of a drachm of the extract of belladonna, dissolved in an ounce of water, have often dissipated in the course of two or three days facial neuralgiæ, against which all other remedies had been found unavailing. Belladonna seems to possess an elective action on the nerves of the fifth pair. Frictions, employed five or six times a day on the parts affected with neuralgic irritations, have often been crowned with success. The good effects of the oil of turpentine are also vaunted, but we have to apprehend an inflammation of the intestinal tube. Finally, there is an empirical mode of treatment, the efficacy of which appears incontestible in many cases: we refer to acupuncture, and electro-puncture. The numerous examples of cure, in cases of sciatic, facial, and other neuralgiæ, reported by MM. Majendie, J. Cloquet, and Sarlandiere, cannot be called in question.

The means which we call rational, because we can explain their action, are revulsives, and principally burning by means of the moxa, or incandescent iron, also irritating frictions, blisters, and cups. Sciatic neuralgia has often yielded to douches of hot water or vapour. No doubt but the same effect might be obtained by its application over the course of other nerves affected with this malady. Before we resort to the employment of revulsives and antispasmodics, we should always calm the irritation by the antiphlogistic treatment; experience and theory agree in the fact of its being much more easy to remove it afterwards.

If neuralgia depends on the incomplete section of a nervous branch, we complete this section, and resort to the appropriate operations in other cases that require surgical means.

TETANUS.

Pain and permanent contraction of all, or of nearly all, the muscles, and more particularly of those of the trunk.

Symptoms.

This malady makes its appearance suddenly, or comes on gradually. It is often preceded by trismus, that is, by convulsions of the muscles of the jaws, with acute pain in this part; pain in swallowing; afterwards contractions of the muscles of the trunk supervene. If all these muscles are convulsed, the trunk remains straight; if the extensor muscles alone are contracted, the spine and head are drawn backwards; this constitutes *opisthotonos*; if the flexor muscles are affected alone, the trunk is bent forwards, constituting *emprosthotonos*. Most frequently the muscles of the extremities participate in the contraction of those of the trunk. The contraction does not present any alternation of relaxation, hence the name of tetanic rigidity, (*roideur tetanique*,) which has been given to it. These symptoms, truly pathognomonic of tetanic convulsions, are accompanied by other accidents more or less constant, such as subsultus tendinum, violent fits of convulsion, pain, acute, atrocious, eliciting piercing cries, sleeplessness, delirium, aphonia, difficulty of respiration, fixity of look, suffusion of the eyes. Tetanus has been divided into the complete and incomplete, into the perfect and imperfect; but these divisions are useless, and indicate only more or less violent degrees of the malady, or that it affects the whole or only some parts of the muscular system. Trismus, for example, is a true partial tetanus.

Causes.

We have seen that irritations of the brain and spinal

marrow, as well as those of the membranes which envelope them, may produce clonic convulsions and paralysis; they may also give rise to tonic convulsions, that is, to tetanus. The irritation of the meninges determines particularly convulsions of the latter species, and we know that spinal arachnitis gives rise to phenomena completely similar to those of tetanus. Cerebral irritations may convulse all the muscles; those of the spinal marrow only convulse those which correspond to the part irritated. Irritation of the nervous centres, therefore, of the brain, and particularly of the spinal marrow, constitutes the first point of departure, and consequently all the causes of these irritations may be the causes of tetanus. (See Encephalitis; see also Myelitis and Spinal Arachnitis.) Excessive heat and cold are very common causes of it. It is remarked that it often attacks new-born infants in equatorial regions, where the temperature is very elevated, and in the regions of the north where they plunge them into freezing water. Another point of departure is the irritation of a nervous branch remote from the centres; it is thus that punctures, lacerations, incomplete divisions, contusions, or compressions of one or more nervous branches, are often the causes of tetanus; a pin, a needle, a splinter, or any other body driven into the finger, determine sometimes accidents entirely local, sometimes a neuralgia more or less limited, and sometimes tetanic convulsions. Large gunshot wounds being almost universally accompanied with contusions, comminutive fractures, splinters of bone, which irritate the nerves, not unfrequently give rise to it. In all these cases we denominate it traumatic tetanus. Intestinal worms and pains of the teeth may produce it, particularly in infants; I have now under my care a case of tetanus produced by the sting of a bee; it cannot be doubted that certain substances introduced into the economy, and having an elective action on the spinal marrow,

the cerebellum, or the cerebrum, sometimes determine this disease.

We may then establish it as a general rule, that tetanus depends always on an irritation having its primitive seat in the extremities, or in the centres of the nervous system. How can an affection of the nervous extremities repeat itself on the centres in such a manner as to place them in the same pathological state as though they had primitively received the irritation? This is a question, the discussion of which cannot find a place here; suffice it to know, that many other affections follow this double march in their development; to cite but one example, we know that epilepsy depends sometimes on a primitive irritation of the brain, at other times upon a cause existing at a distance, as the compression of a nervous filament, the point of departure of the aura epileptica. But it often happens that the nervous centres at last keep permanently the irritation which they have received from the extremities, and that from the secondary having become the principal seats of irritation, a cure cannot always be effected by causing the cessation of the primitive irritation. Simple stimulation or sur-excitation, without being elevated to the degree of inflammation, may produce tetanus, and then it leaves no traces in the organs in which it is seated; at other times, and more frequently, there is a true phlogosis.

Prognosis.

It is always most grave. This disease proves fatal in the course of a few hours or days. In the unfrequent cases, in which it terminates in health, this event does not occur until after the lapse of fifteen or twenty days, sometimes at an earlier, and sometimes at a later period. In new-born infants it is promptly mortal.

Treatment.

Plans of treatment the most opposite have been tried, and abandoned in their turn, and have rarely been crowned with success: thus they have employed the antispasmodics, and particularly opium in high doses, internally and externally, ether, assafœtida, musk, castor, decoctions of canella and mint, fixed tonics, mercurial frictions, sudorifics, purgatives, &c. These medicines should not be administered indiscriminately; we should regard the nature of the causes. If then tetanus is connected with irritation of the alimentary canal, we abstain from stimulants, and have recourse to blood-letting, the warm bath, &c. If it is owing to the presence of worms, we should cause their expulsion by suitable medicine, of more or less energy, according to the constitution of the patient and the state of the intestinal canal.

The application of ice is one of the means that have most frequently succeeded. This application should extend over the whole surface of the body. For this purpose we envelope the patient in a cloth wet with iced water, or, which is still better, containing pounded ice; we administer at the same time a sudorific drink, such as the decoction of guaiacum, sarsaparilla, &c. with the precaution of not irritating too much the digestive tube. We then remove the ice for some minutes, and apply it again; we repeat this mode of proceeding several times in succession. The object of this plan is to produce reaction, and to invite towards the skin the excess of vitality fixed on the nervous centres.

If the tetanus arises from any mechanical lesion, we must, in the first place, remove this cause of irritation, without which all treatment will be unavailing. The employment of general blood-letting, and the application of leeches along the spine, has been advised; but this means

is useless if the primitive seat of irritation exists in the nervous extremities, as is most frequently the case. Besides, there is not always a focus of irritation to calm; a simple sur-excitation may give rise to tetanic convulsions. But when the existence of an inflammatory focus is clearly demonstrated, blood-letting should be employed.

In cases where there is no gastric irritation, might we not try the administration of tartar emetic in divided doses? Experience proves that this substance, thus administered, contributes powerfully to produce the cessation of the muscular contractions, and it certainly does not produce this effect by its revulsive action upon the stomach, for the same result is produced by cutaneous absorption, and by injection into the veins. A number of observations prove the utility of this medicine associated with digitalis. The dose of each of these substances is from a sixth to a quarter of a grain every hour.

Acupuncture and electricity have in every form been unsuccessfully tried.

Cramp has some analogy with tetanus; it consists in the permanent contraction of one or more muscles, and generally of those of the lower extremity; but this affection is usually of little importance, and is most frequently dissipated by placing the limbs in a suitable position, and by practising on them gentle frictions.

CLONIC CONVULSIONS.

We call those convulsions clonic, which exhibit an alternation of muscular relaxation and contraction. After all that has already been said, it is easy to conclude that convulsions depend, in the greater number of cases, upon an excitation, an irritation, or an inflammation of the nervous centres. But the point of departure is not always in the centres themselves. It is often in organs, in tis-

sues, or in nervous branches, situated at a great distance from these centres, the irritation, compression, or laceration of which, acts upon the centres, stimulates them, irritates them, and deranges their functions, whence result afterwards all the disorders of innervation. These disorders, viewed as a whole, should not be considered as an essential malady, but as external signs, indicating the state of the brain, of the spinal marrow, of a viscus, &c.; in the same manner as the acceleration of the circulation, the heat of the skin, the abnormal redness of the tongue, thirst, in one word, all the phenomena which constitute fever, are not the disease, but the indices of a local inflammation, more frequently of the digestive passages, but whose point of departure may be situated in many other parts of the body. In like manner convulsions, periodical or continued, general or partial, with regular or irregular paroxysms, are the indices of a local affection of the nervous system, more frequently of its centres, or of any viscus whatever. It is thus, that when infants are seized with convulsions, this symptom arises sometimes directly from a cerebral or spinal irritation, as for example, in meningitis, (acute hydrocephalus of authors,) determined by insolation, a fall upon the head; and at other times from a remote irritation, as from dentition, from worms; in fact, in the case of infants and other persons whose nervous system is possessed of great mobility, this local irritation although remotely situated, repeats itself with great facility upon the brain, which then acts in the same manner as when primitively affected. Furthermore, the irritation which was only secondary, may, by its violence, its repetition, or its duration, determine a true, fixed inflammation of the centre, which at first was only irritated. Thus it is not uncommon for the pains of dentition to give rise to a true cerebral or cerebro-spinal arachnitis. The causes then of convulsions are all the or-

dinary causes of irritation, acting on the nervous system. Their seats are in the nervous centres or extremities, or in the organs with which these centres readily sympathize. The moral affections which exercise a direct influence over the brain, may determine convulsions, without producing inflammation, and by cerebral excitation alone; but in the end, that which was at first only an exaltation of vitality, may pass to a state of inflammation, of which we have many examples. The treatment of convulsions should therefore be based on a knowledge of the locality of the irritation, which gives rise to them; yet when there is no inflammation, or when, after having combated it, there remains a convulsive habitude, there are therapeutic means which may put an end to it, or prevent its return. We shall not describe here the numerous species of convulsive maladies pointed out by authors, first, because these affections are not here considered in the same point of view in which they have for a long time been regarded; secondly, because to have described the cerebro-spinal maladies is at the same time to have spoken of the greater number of the nervous affections. We will only enter upon a very few of the details.

CHOREA, OR ST. VITUS'S DANCE.

Irregular and involuntary gesticulations of the limbs, of one or of both sides of the body, a staggering gait, or rather a movement of the inferior extremities, resembling more or less that of a buffoon. We may arrest the gesticulations by seizing the limbs of the affected side; those of the opposite side are then suddenly seized with similar convulsions, and if we endeavour to keep motionless all the extremities, as well the superior as the inferior, the convulsions assail the thoracic muscles. We affirm this as having witnessed it in two cases. Sometimes

this state is accompanied by a species of imbecility, or with diminution of the intellectual faculties.

Causes.

It makes its attacks particularly at the age of puberty, and more frequently affects girls than boys: still no age is altogether exempt from it. The first cause of this neurosis is evidently a cerebral excitation, often determined by a moral influence, and particularly by fear. It is not long since the young girls of a commune were almost all affected with chorea, terrified by the descriptions which certain missionaries gave of the torments of hell. This malady is readily propagated by imitation, so that the affection of a single individual is sufficient to cause its communication, like an epidemic, to those who witness the extraordinary movements: here still the cause of this propagation is nothing more than the moral influence upon the brain; moreover, this mode of the transmission of nervous affections is not confined to this species alone. We must likewise regard as causes of this affection, venereal excesses, intestinal worms, a chronic alteration of the brain.

Treatment.

First, to separate the patients from each other; to act upon their minds by creating impressions the reverse of those they have received. To call into action the powers of the will to prevent the return of the attack. It is to various moral impressions that we must attribute the cures operated in these cases, and so many others analogous to them, by amulets, prayers, exorcisms, animal magnetism, &c. The sulphate of quinine, given immediately after the paroxysm, has often produced happy results. We employ likewise the cold bath, muscular exercise, and sometimes the antispasmodics.

THE MUSCULAR TREMOURS OF GILDERS.

Gilders, and other persons exposed to mercurial emanations, are liable to be attacked with various affections, among others, with convulsions which have the greatest resemblance to chorea. They have a vacillating gait, and move backward when they desire to move forwards, and *vice versâ*; involuntary gesticulation of the arm; in one word, a removal of the muscular movements from under the influence of volition.

Notwithstanding this resemblance of the phenomena, the treatment should not be the same in these two cases.

After having removed the patients from all mercurial influence, we have recourse to sudorifics in high doses, if the digestive tube is sound, and we particularly employ the thermal sulphurous waters, as well internally as in the form of baths or douches; if there is constipation, we administer mild laxatives. This treatment is likewise useful in all the other cases, in which an excessive quantity of mercury has been introduced into the economy.

HYSTERIA.

Symptoms.

We observe two orders of phenomena in the attack of hysteria. The one occurs in the viscera of the abdomen, the other in the locomotive nerves. In the abdomen, these phenomena have much analogy with those of hypochondriasis: thus there is the sensation of a ball that moves with more or less rapidity in the abdomen, and rises towards the chest and throat. This ball seems to compress the diaphragm, the heart, the lungs, and the throat, to such a degree as to cause the fear of suffocation. There is flatulence, eructation, hiccough, sighs, violent

palpitation of the heart. In some women the abdomen dilates and contracts, rises and falls with the rapidity of bellows.

This tumultuous state of the abdominal viscera is produced by disorders acting upon the centre of perception, whence result at first malaise and anguish, which keep the patient immovable, and prevent her speaking; but in a short time the irritation is transmitted to the brain, and rises to such a degree, that the will loses its influence over the muscles, and the woman agitates herself convulsively in all directions, in the manner of epileptic patients. There is violent contortion in the limbs, twisting, flexion of the spine in diverse directions, tetanic rigidity, contortions of the face, convulsive movements, rolling of the eye, and various other extraordinary motions. In some cases the nervous disorders of the abdominal viscera, instead of provoking convulsions, produce a cessation more or less complete of the functions of the brain and other organs. The woman remains motionless, loses the use of her senses, respiration is suspended, and the circulation of the blood is almost imperceptible: sometimes even life appears to be perfectly extinct.

It happens frequently, that attacks of hysteria terminate by cries, by weeping, by fits of immoderate laughing, by an abundant flow of limpid urine, by the excretion of mucosities from the vagina; sometimes a flow of urine precedes and terminates the attack.

Causes.

The occasional cause is an irritation of the uterus, but this irritation does not produce all these sympathetic phenomena, except in women endowed with great irritability, and whose constitution is on that account called nervous; in a woman of little irritability, the uterus may be irritated or inflamed without giving rise to hysteria; the signs of the

uterine affection are limited to local suffering, and some kind of discharge. Every time, on the contrary, that the genital apparatus suffers in the first, the other organs partake of the affection; it is not necessary, to produce this effect, that there should be a real inflammation; the sanguineous congestion that precedes the menstrual flux, the abuse of venereal pleasures, or extreme continence, every species of unusual orgasm, may irritate the uterus to the point in which it reacts upon the other viscera, through the intermediacy of the grand sympathetic, and on the brain, and thus determines an attack. But as the irritation of the uterus involves the other viscera in derangement, so the irritation of these viscera excites the vitality of the uterus and occasions attacks. Chronic gastro-enteritis, indigestion, and irritations of the chest, are then, in women who are predisposed, causes of hysteria. Moreover, though the point of departure be the uterus, which disturbs the cerebral functions, yet when women have contracted the habit of these attacks, all excitations acting immediately on the brain may produce them; the brain then excites the uterus, which reacts, and the same phenomena are produced. It is thus that strong moral affections, certain odours, the sight of a disagreeable object, occasion hysterical attacks.

Indolence and luxury predispose to hysteria, as also to most of the nervous maladies, for, the muscles not being exercised, vitality remains in excess in the nervous system.

The attack may last from a few minutes to some hours.

In hysterical women, menstruation is ordinarily deranged, suppressed, or diminished, rarely augmented, often irregular.

Prognosis.

We must not forget that uterine irritation is most frequently accompanied with that of the digestive organs,

that it may have altered the tissues of the womb, and that the danger is in proportion to the gravity of these affections; but in general hysteria terminates after some years of duration, or towards the critical age; at other times, on the contrary, it makes its first appearance at this period of life. It is not uncommon for it to lead to mania and epilepsy.

Treatment.

As in the majority of cases, there is a concomitance of uterine and gastro-enteric irritation, the treatment should be the same as that of chronic gastritis. If the uterine irritation is of a certain degree of acuteness, we combat it with local bleeding, lavements, baths, refrigerant drinks, abstinence from stimulating aliments; but if there is only simple sur-excitation, or exaltation of sensibility, we should be sparing of blood-letting, which might debilitate the patient and render her more sensible to the impression of the causes that determine the attacks. The irritation being appeased by the emollient regimen, the convulsive habit is to be attacked by antispasmodics, such as assafoetida, opium, valerian, ether, &c. The Peruvian bark has sometimes succeeded, especially when the disease has exhibited the character of periodicity.

We must be particular in prescribing muscular exercise in the open air, agricultural occupation, travelling, gymnastic exercises, &c.; these exercises have the double effect of preventing the cerebral reflexion of the sensations which the viscera experience, and of throwing upon the muscular apparatus, the surplus of vitality which torments the nervous system. Coition is only beneficial, when the irritability of the uterus arises from continence; if, on the contrary, this irritability is the effect of excessive indulgence, as often happens, the patient must use venery but very seldom, and in some cases abstain altogether. We

should not always provoke by emmenagogues the return of the menses, whose suppression depends upon irritation fixed either upon the womb or upon some other part. We must then first of all allay this irritation. (See Amenorrhœa.)

If we are only occupied with the prevention of the attack, and if its approach be announced by prelusive signs, we often succeed by using friction over all the limbs, by affusions of cold water upon the face, by the application of a ligature between the point of departure and the brain, if we can ascertain it, as in epilepsy; the woman can sometimes prevent an attack by the sole influence of the will. During the attack we place the patient in the horizontal position, and admit the fresh air; we loosen the parts of the dress which may bind her, and we must take care that she does not injure herself; affusions of cold water, friction, antispasmodic lavements, and especially those of assafoetida, are often employed with advantage to break up the attack, when it is very violent or protracted. It is not always prudent to make the patient inhale strong odours, as many women are greatly incommoded by them; with regard to this point, we must consult the habits of the individual.

HYPOCHONDRIASIS.

This affection, which some authors have recently styled gastro-enteralgia, is nothing but a chronic gastro-enteritis in a nervous and irritable subject. (See Chronic Gastro-enteritis.)

NEUROSES OF THE ORGANS OF RESPIRATION.

CONVULSIVE ASTHMA.

Symptoms.

The attack of asthma generally comes on during the night, by a sudden sense of constriction of the chest, by a wheezing respiration, so painful that it compels the patient to assume the erect posture. There is violent and convulsive cough, and considerable oppression, which renders speaking difficult, and causes its interruption by the want of respiration. Towards the end of the paroxysm, which ordinarily occurs at daybreak, the cough abates, the dyspnœa diminishes, the patient expectorates a great quantity of mucosities, all the symptoms are remarkably ameliorated, and even disappear more or less completely, until the following night, when the attack is renewed. The pulse is sometimes accelerated, weak, small, at other times large and strong, according to the cause of the disease and the constitution of the patient. The attack is not always sudden; in some cases it is preceded by lassitude, torpor, somnolency, borborygmus, pains of the head.

Causes.

Asthma may be determined by an organic affection of the lungs or of the heart, by a chronic irritation of the bronchial mucous membrane, by a chronic gastritis. As the attacks return periodically, the existence of organic affections as the causes of asthma have been denied: but in most of the other intermittent affections, we meet with permanent irritation of an organ. This permanent irritation is exasperated, or it determines by degrees an afflux towards the lungs; this produces the sense of anxiety, and the want to respire, which provokes violent contractions

of the thoracic muscles, continuing until the organs of respiration find themselves freed either from this exacerbation of irritation or from the sanguineous congestion which it may have determined. This state terminating, the respiration becomes more calm, until at the end of a period varying from eighteen to twenty-four hours, the same phenomena again make their appearance. Thus, to speak properly, there is no asthma purely nervous, except that produced by moral causes, and in this case even, it often depends upon a bronchial, pulmonary, gastric, or cardiac irritation, awakened by this moral influence. The return of the exacerbation at fixed epochs, has nothing in it which should astonish us; sleep, the sense of hunger, the alvine dejections, the menstrual evacuation, &c. also occur at determined epochs.

A great number of occasional causes may produce asthma in subjects who are predisposed, and in the nervous and the irritable. Thus humidity, cold, sudden atmospheric vicissitudes, plethora, every thing that throws the blood upon the lungs, as running, the return of certain seasons, the suppression of an habitual evacuation, of an issue, the repression of a cutaneous eruption, the metastasis of an arthritic or muscular irritation, &c. may occasion it. Hydro-pleuritis and pulmonary tubercles are often the cause of asthma: the former, by the obstacle which it presents to the circulation, and the latter by the irritation which they keep up in the parenchyma of the lungs.

Prognosis.

If the irritation is slight, and especially if the subject is young, it is easily displaced; it often terminates in pulmonary consumption or in hydrothorax: a very short respiration, and paralysis of the arms, are fatal symptoms.

Treatment.

It has been observed that asthma often ceases upon the appearance of another irritation, which supervenes spontaneously, for example, an eruption or a hæmorrhage. The observation of this fact should serve as a guide to the practitioner. The most efficacious means of removing the attack of asthma, and of obtaining a radical cure of the irritation which gives rise to this malady, is blood-letting, frequently repeated. General blood-letting should be preferred if the malady depends upon an affection of the heart, and topical, if it depends upon an irritation of the bronchia, trachea, or larynx. After blood-letting, we employ revulsives, such as a blister upon the chest, a permanent issue on the arm. If asthma depends on the displacement of an arthritic or rheumatic irritation, we should endeavour to recal this irritation to its primitive seat. The same principle is applicable in case of the suppression of an issue, of a hæmorrhage, or any other evacuation.

When the irritation has been allayed or destroyed by a prolonged employment of this treatment, the convulsive habit, if it persists, may be combated by antispasmodics; if there exist no gastro-intestinal affection, opium, hyoscyamus, lactuca virosa, assafœtida, ether, and the sulphate of quinine, have often been employed with success. Of late the employment of electricity has also been highly extolled. To prevent the return of the attacks, the patient must avoid all the occasional causes.

INCUBUS, OR NIGHTMARE.

This is a shade of asthma. If we suppose the dyspnoea which precedes asthma to disappear on waking, we have an idea of incubus. Persons subject to this disease

experience a sense of compression and of constriction of the chest, which appears to them to be produced by the pressure of a weight, as that of a cat, a bundle, &c. The causes are the same as those of asthma, that is, most frequently an irritation, chronic or otherwise, of the organs of respiration, or of the heart.

The treatment should consequently be the same as that of asthma. It is expedient for the patients to abstain from eating in the evening, and, if the phenomenon often occurs, it is necessary for some one to sleep near them, for the purpose of waking them.

NEUROSES OF THE HEART.

PALPITATION.

The symptoms of this affection consist of pulsations, stronger, more rapid, and less regular than in the normal condition.

Causes.

In the greater number of cases palpitation depends upon an organic affection of the heart, or of the great arterial trunks, or of the lungs. In these cases we should investigate the precise seat and nature of these organic lesions, of which the palpitation is only a symptom. It may likewise be produced without the existence of any organic alteration, and solely by an excessive irritability of the heart, brought into play by the occasional causes which act upon this organ; such are strong moral affections, the acceleration of the course of the blood, occasioned by rapid walking, or in any other manner, venereal excitement, disagreeable odours, &c.

It is to be remarked that individuals who are thin, convalescent, exsanguious, or of a feeble constitution, more readily experience palpitations than those who enjoy a

sanguine, robust, and vigorous constitution; the latter, in fact, offer more resistance than the former to the impression of the occasional causes. Pains of the viscera, even without inflammation, the influence of the genital organs, a gastric or other irritation, the transfer of an irritation, as for example, the muscular or arthritic to the heart, may give rise to palpitation. We may consider it as nervous when it depends solely upon an excess of irritability, but it is by no means of this character, when it depends upon an organic irritation or alteration; for a carditis, a pericarditis, a hypertrophy of the heart, an ossification of the great arterial trunks or of the valves of the heart, pulmonary tubercles, a hydro-pleurisy, &c. all causes capable of occasioning palpitation, are certainly not neuroses. The line of demarcation between palpitation which depends upon an excess of sensibility, and that which depends upon an alteration either of the heart or of the other organs, is not always easily determined; yet when it occurs but rarely, it is probable that it is only nervous. We must never forget that these palpitations occur under the influence of a temporary excitation, and that this excitation, in consequence of its repetition, may become a permanent irritation, then an acute or chronic inflammation, which cannot long affect a tissue without altering its structure.

Treatment.

When palpitations are but a symptom of an affection, either of the heart itself, or of the organs of respiration, or at least but an index of the commencement of irritation in these different organs, it is not against the palpitation that the treatment must be directed, but against the affection which is the cause of it. If there is plethora or a disposition to hypertrophy of the heart, we have recourse to blood-letting, and to a mild regimen, containing but little

nourishment. We try to recall suppressed evacuations, or we supply their place by blood-letting; we employ revulsion towards the extremities, if the malady depends on a transfer of an arthritic or muscular irritation. As to palpitations called nervous, and which depend on a great mobility either of the heart or of the nervous system, we must employ the same means if the subject is strong and plethoric; if he is weak and feeble, the abstraction of blood will only augment the disposition to palpitation. In this case we endeavour to strengthen the constitution with food which is substantial, without being of a heating nature, by a residence in the country where the air is pure and free, and by moderate muscular exercise. We employ likewise the fixed tonics. Should we administer the *digitalis purpurea*? It is almost always of manifest utility, if the stomach is not in a state of irritation. It is in fact a powerful sedative to the movements of the heart, which we must not overlook; but we should not employ it under the form of the alcoholic tincture, as is often done. This combination of a diffusible stimulant with a sedative substance, is absurd.

If the movements of the heart, instead of being accelerated, are suspended, as occurs in syncope, produced by blood-letting, we must employ stimulants internally and externally, dry friction, and especially affusions of cold water upon the face and chest.

ANGINA PECTORIS.

In this complaint persons are seized suddenly, and often during walking, with an acute pain and a sense of constriction, which seems to draw together the sternum and vertebral column; suffocation is threatened; the patient is in fear of death, and is forcibly arrested in the midst of his progress. The attacks, at first slight, at distant periods, and of short duration, become progressively more violent,

longer, and more frequent; they occur when the patient goes to bed, when he places himself in the horizontal position; the facility with which they are brought on becomes greater and greater, and they are renewed under the influence of the slightest causes. In some cases the pain does not occupy the chest exclusively, but extends to the superior members, whose movements it embarrasses, to the lower jaw, to the ear, to the diaphragm, or to the epigastrium. The duration of the malady, and of its attacks, and the time of their return, present no regularity.

Causes.

Asthma, palpitation of the heart, and angina pectoris, are maladies which are all attributable to common causes; these causes are obstacles to the circulation of the blood, which depend upon lesions of the lungs, of the heart, or of the great arterial trunks. In individuals who fall victims to these affections, we constantly find diverse organic alterations, according to the seat, the duration, and the degree of the irritation: we meet with dilatations and hypertrophy of the heart, ossification of its valves, as well as of the great arterial trunks, traces of chronic pericarditis, tubercles, and other alterations of the lungs, scirrhus of the stomach, &c. The attributing of this affection, as has been done by Jurine, to a lesion of the pulmonary and cardiac nerves, is a pure supposition, disproved by dissection.

The occasional causes which determine an attack when there exists a predisposition, are the same as those of asthma and palpitation of the heart, (see these articles.)

It results from these observations on the etiology of angina pectoris, that this is not an essential malady, that it is not even a nervous malady, but simply a form of irritation of the lungs or of the heart.

Prognosis.

This disease is very serious, particularly if it has been of long duration; it may terminate by a sudden death. If it is combated from its first attack, there may be some hope of arresting the progress of disorganization.

Treatment.

If the pulsations of the heart are strong, and the subject vigorous, the abundant abstraction of blood is necessary; in opposite cases it would be injurious. In all cases, rest or gentle exercise, emollient drinks, vegetable regimen, abstinence from venery, revulsives, such as cups, blisters, irritating frictions upon the sternum and between the shoulders, the recalling of suppressed evacuations to their primitive seats, or the supplying of their place by blood-letting. The same principle must regulate our treatment in gout or any other phlegmasia which has been repelled. To recall an affection of what kind soever to its primitive seat, we must calm the consecutive irritation, and stimulate the part which was primitively diseased. We should remember, in relation to this, that the facility with which an irritation is displaced, is in the inverse ratio of its intensity, and that irritation has a greater tendency to reappear in a part in which it has already existed.

Digitalis purpurea should not be overlooked as a means of reducing the pulsations of the heart.

We succeed sometimes in removing or in moderating an attack, by the administration of antispasmodics, when the digestive tube is sound.

It is unnecessary to remark, that to prevent a return of the attack, the patient must be guarded against the influence of the occasional causes.

The exhibition of emetics, as advised by Jurine in this affection, is attended with extreme danger, on account of

their increasing the sanguineous congestion about the lungs and heart. The employment of phosphorated lemonade, as some authors recommend, to prevent ossification of the arteries, is absurd.

HYPERTROPHY AND ANEURISM OF THE HEART.

Hypertrophy of the heart, which Corvisart denominates active aneurism, is announced in persons who are inclined to it, by the following signs: at first, there is tendency to suffocation, acceleration of the circulation of the blood, strong pulsations of the arteries; these persons are lively, irascible, their face is red, their extremities are warm, so that they do not fear cold; they are subject to frequent and abundant hæmorrhages, by which they find themselves benefited; their constitution is generally robust and vigorous, and all the functions are performed sufficiently well; what incommodes them most, is violent locomotion, or a collection of many persons in one place.

This disposition is always progressive, so that we trace the malady from the first degree of hypertrophy, to aneurism, properly so called. On the occasion of cold, heat, or of a passion, hypertrophied subjects are attacked with pulsations of the heart so violent, that patients compare them to the blows of a stick; the pulse is then hard and vibrating; there is the *facies vultuosa*, and the eyes are injected. It is then said that it is an attack of asthma. The first attacks of this kind continue ten, twenty, thirty, or forty hours; but as the disease advances, the dyspnœa endures a greater length of time; at last there comes the state that is named angina pectoris; there is pain in the left shoulder, in the arm, &c. It is not essential to the existence of hypertrophy that dyspnœa be continual, as some authors pretend; for organic affections of the heart always commence with a slight transitory dyspnœa. We

know that the disease is not connected with the orifices of the heart, when the pulsations correspond in time and force with those of the arteries; in other cases, that is, when there is irregularity, the obstacle is more frequently at the orifices of the heart.

If the patients are calm and cautious, and preserve a state of rest, they may live for a very considerable length of time; but if they expose themselves to the action of the occasional causes, they may die of an attack of dyspnœa, or angina pectoris. Some patients expectorate a great deal, others experience attacks of coughing without being able to expectorate. At last there arrives a period, when the pulse, from having been hard and vibrating in the beginning, and during the greater part of the progress of the malady, becomes small, soft, and weak; by the cylinder applied to the chest, or even by the simple touch, we perceive a large heart which moves with difficulty, and whose pulsations are weak, slow, and unfrequent. This is aneurism properly so called, which authors have named passive aneurism.

There are besides, various other symptoms, that show to a certain point whether the affection is seated in the right or left cavities of the heart, but this precision of diagnosis is of little avail in practice; it is thought that the seat is in the left cavity when the pulsations are strong and vibrating, and that the disease occupies the right cavity when the integuments are of a violet colour, or blackish, and pulmonary hæmorrhages are frequent; but this diagnosis is any thing but certain.

On dissection we find different lesions. Death is rarely occasioned by pure and simple hypertrophy, unless the patient has been badly treated, or has had pulmonary congestion, attacks of apoplexy, or a complication of gastritis: we may find hypertrophy of the two sides of the heart; at other times, there is contraction of one side, and en-

largement of the other; in certain cases, the walls of the left ventricle are attenuated and dilated, in other cases they are thickened. We sometimes meet with laceration of the columnæ carneæ of the heart, sometimes the orifices are obstructed by concretions varying in hardness, resembling polypus, consistent, of a cartilaginous or osseous character; there is often thickening and induration of the valves.

The internal membrane of the heart is sometimes red, there are ulcers at the base of the heart, its substance is hardened or softened, altered in its composition, friable; we often observe ossification of the great vessels in the neighbourhood of the heart, of the coronary arteries, &c. Clots of blood are sometimes organized and adherent to the internal walls of the heart, the cavities of which are then extremely contracted.

Causes.

There may be an innate predisposition; the occasional causes are the too frequent stimulation of the heart by violent exercises, strong passions, the action of heat or cold, venereal pleasures, the transfer of an irritation to the heart, as in the case of the suppression of an issue, a herpes, a hæmorrhage, and particularly the metastasis of a muscular or arthritic irritation, food of too succulent a quality, the abuse of alcoholic drinks, the chronic phlegmasiæ, and organic alterations of the lungs, ossification of the arteries.

These different causes produce sometimes simple palpitation, a pericarditis, a pneumonia, a pleurisy, a catarrh, polypi of the heart; at other times hypertrophy and aneurism, according to the special irritability of the organs contained in the thoracic cavities.

Prognosis.

As long as hypertrophy is but little advanced, we may obtain its cure by the treatment about to be indicated. The chances of success diminish in proportion to the progress it has made, and all hope is over when the disease has arrived at the stage which is called passive aneurism. Subjects affected with hypertrophy may be carried off by a pneumonia, a pulmonary or nasal hæmorrhage, or an apoplectic attack. The diverse alterations which the heart and its appendages undergo, often give rise to apoplexy, by the obstacles which they oppose to the circulation of the blood, but this phenomena does not supervene but when the disease is very far advanced.

Treatment.

Variable, according to the epoch of the affection. That of hypertrophy is rigorously antiphlogistic: thus blood-letting, abstinence, cold to the epigastrium, to the region of the heart, refrigerant drinks, the subjugation of the passions: we advise every thing that prevents the acceleration of the blood, and every thing that retards sanguification; consequently an absence of mental emotion of every kind, the avoidance of places which are too hot, or crowded, as assemblies; the ascent of stairs, cries, singing, playing upon wind-instruments, and prolonged watching, are to be avoided; the abandonment of laborious professions should be enjoined. We have recourse to the means proper to diminish the rapidity of the circulation, particularly to the digitalis purpurea in progressive doses from one to nine or ten grains and upwards, daily, to the acids taken in small quantity, and to drinks acidulated with the vegetable acids. In administering the digitalis, we must watch its action upon the alimentary canal, and diminish the dose or cease the employment of it, if it creates irritation

there. Complete abstinence from coffee, tea, and spirituous liquors. By these means we arrest for a long time the progress of hypertrophy, and if the patient is willing to submit to the method of Valsalva, we may hope for a radical cure. This method consists in the employment of copious blood-letting often repeated, in not giving to the patient for drink or for nourishment any thing but water with the yolk of an egg, and when he is very weak, increasing his strength gradually by light diet, progressively more nourishing. This treatment should be pursued during two or three months.

The abstraction of blood must be more frequent in winter than in summer, because the blood being in this season more strongly thrown upon the viscera, the danger increases. Catarrhs, which are also more frequent during this season, require leeches, rest, and a mild warmth; when an attack of dyspnœa occurs, we have immediate recourse to blood-letting. If there be obstinate cough without expectoration, we may give the squill or the kermes mineral, paying attention to the state of the digestive organs.

When dropsy supervenes, there is still hope if there is only hypertrophy, if the obstacle to the circulation is not too considerable, and if the communication of the cavities of the heart with the arteries is free: we employ in the first place blood-letting, afterwards diuretics and purgatives. The complications of pneumonia, of gastritis, and of apoplexy, require the treatment appropriate to these affections. (See these articles.)

WHITE, OR LYMPHATIC IRRITATIONS.

We have hitherto seen various organic alterations produced by a preceding inflammation, which by causing an afflux of fluids to the inflamed tissues, gives rise to tuber-

cles, to white tumours of the articulations, to melanosis, to obstructions of the liver, to cancer of the stomach, of the womb, or of the bladder, &c. In these cases, it was always inflammation which terminated in these forms of disease. We shall now consider these forms as primitive, and before all inflammation; that is to say, we shall now take up the consideration of scrofula, and of many other affections which are referred to it, such as rickets, marasmus, goitre, &c.

Physicians entertain very different opinions on the nature of scrofula; some attribute it to weakness, or to atony; others make it depend upon irritation, but upon an irritation which is slow, feeble, and below the inflammatory irritation, and on this account they give it the name of sub-inflammation. The doctrine of the latter is more conformable to the observation of facts and to reason.

The objections which are raised against this doctrine are refuted without difficulty; they reduce themselves nearly to the following:

First Objection.—Scrofulous affections are generally met with in weak subjects, and those possessed of little energy. But we must know whether the idea which persons generally attach to the words strength and weakness is one of great accuracy; the individual is weak, according to the common acceptation of the term, who has the muscular system little developed, and the nervous system endowed with great energy; hence we erroneously proceed to attribute to all the systems, what is only predicable of particular ones among them, especially as the different systems of the economy live in a state of mutual dependence, and in such a manner, that one of them does not often predominate but at the expense of the rest.

Second Objection.—The lymphatic temperament is that which predisposes most to scrofula. This is true; but is there, in this temperament, weakness of the lymphatic

system as they think? It is much more natural to attribute to an excess of vitality, the action by which this system absorbs, elaborates, and carries a greater quantity of the lymph. It is thus we say that there is energy of the sanguineous system, when all the parts are steeped in blood, and the apparatus of circulation is largely developed. Why is not the same mode of reasoning applicable to the lymphatic system?

Third Objection.—The causes which determine the scrofulous constitution, or which occasion the development of scrofula, when this constitution is innate, are rather of a nature to debilitate than to excite. This remark is true, although a false conclusion is deduced from it; for, in the first place, under the influence of debilitating causes, such as humidity, cold, obscurity, the absence of the solar light, bad nourishment, the want of exercise, the muscular, sanguineous, and nervous systems develop themselves but little, a circumstance which favours the predominance of the cellular and lymphatic over the other systems; secondly, when the scrofulous predisposition exists, the ordinary causes of irritation occasion the development of scrofula; in fact when, in a subject of a scrofulous constitution, an articulation happens to be the subject of external violence, a white tumour will there develop itself, while in other subjects nothing similar will take place: examples of this kind present themselves in great numbers. If in scrofulous subjects the irritating causes attack preferably the lymphatic system, it is because these causes always tend to develop irritation in the tissues most disposed to contract it; thirdly, scrofulous diseases with regard to their seats, follow, in the different stages of life, the order of irritation in general; that is to say, we observe them in the parts of the body that enjoy the greatest share of vitality; thus in infancy we observe them on the head, in the lower belly, and on the external

parts of the body; we see in them tinea, an engorgement of the glands of the neck, of those of the mesentery; in youth the lungs are particularly attacked, and we meet with tubercular phthisis; in old age the articulations swell, the legs are ulcerated, &c.; the lymphatic engorgements of the scrofulous lead to suppuration, as well as engorgements of a nature which all allow to be inflammatory.

The small share of vitality possessed by the lymphatic system, accounts for the slow progress of the irritation.

It is not debility then that is the immediate cause of scrofula; it may determine it for the reasons already mentioned, but the scrofulous affection itself is not a debility; how are we to conceive of debility with pain, heat, and swelling?

Fourth Objection.—The scrofulous predisposition and scrofula itself are cured by the employment of stimulants. This observation, in part true, only proves that under the influence of stimulants, such as good nourishment, insolation, exercise in the open air, and under a fine sky, the muscular, nervous, and sanguineous systems gain development and energy; whence the lymphatic system loses the predominance which it had over the systems, and the equilibrium is re-established. Is it not known, moreover, that local blood-letting favours powerfully the resolution of the lymphatic glands of the scrofulous? Do we not know likewise that stimulants, when they do not produce in the other systems the effects which we have just mentioned, hasten the development of scrofula, because the excitation employed turns to the advantage of the superabundant vitality of the cellular and lymphatic systems?

Let us now enter upon the consideration of scrofula in particular, and of some of its varieties.

Signs of the Scrofulous Constitution.—Individuals predisposed to scrofulous affections ordinarily present from infancy the following characteristics; the lymphatic tem-

perament, a remarkable development of the cellular tissues, a swelling of the upper lip and of the nose, a discharge from the ears, a vitreous colour of the cornea, swelling and frequent irritations of the edges of the eyelids, of the conjunctiva, of the mucous membrane of the nose, which is often covered with scabs, lips easily chapped under the influence of cold, a disposition to engorgements of the lymphatic glands on the slightest cause, voluminous articulations, deviation of the bones of the limbs, of those of the thorax and vertebral column, (*rachitis*,) a disposition to caries of the teeth and bones, fair and soft skin.

Scrofula may, however, exist in persons of a dark complexion. Children predisposed to the disease are generally beautiful, lively, and of precocious intelligence. *Tabes mesenterica*, a disease which consists in engorgement of the mesenteric glands, is likewise a sign of the scrofulous constitution, or rather it is scrofula already developed in these glands; for the engorgement of the glands of the neck, of the arm-pits, of the groin, that of the thyroid gland, of the mesentery, the tubercles which constitute pulmonary phthisis, are often only varieties of the same affection, occupying a different seat; this may also be said of the softening and the swelling of the bones, whether in infants or in adults. In fact, in the families in which these organic predispositions exist, in places where this malady is endemic, some are affected with glandular swellings of the neck or of the groins, others with marasmus, pulmonary consumption, rickets, or goitre, or with chronic irritations of the eyelids, &c. &c.

In all these cases it is easy to follow the traces of the same morbid character, namely, an abnormal predominance of the spongy and lymphatic tissues, together with a great tendency of the mucous membranes to contract irritation, whence the frequency of ophthalmia, of otor-

rhœa, of coryza, of pulmonary catarrhs, of gastro-enteritis with the mucous form, in individuals of the scrofulous constitution.

Different names have been given to the scrofulous constitution, according as it occupies the subcutaneous glands, those of the mesentery, the pulmonary tissues, the bones, the articulations, &c.

VARIETIES OF THE SCROFULOUS AFFECTION.

First variety—Tuberculous Ganglites.—The glands of the lateral parts of the neck, from the angle of the jaws to the clavicle, those of the arm-pits and of the groins, those which occupy the course of the great vessels of the limbs, are frequently engorged in scrofulous subjects, and give rise to indolent tumours, rounded, soft at first, and afterwards renitent. At first isolated, moveable, and of inconsiderable size, they afterwards develop themselves successively; in a short time they swell, adhere to each other, and often form considerable masses, projecting and uneven. These engorgements are sometimes observed simultaneously in the glands of the neck, of the arm-pits, of the groins, and of the mammæ, but they may make their appearance only on one or more of these points. All the varieties described further on, or some of them, may exist at the same time with this form. Scrofulous tumours have a very slow progress. They sometimes remain stationary during whole months and years; they however gradually enlarge, and become painful to the touch; they adhere to the skin, which becomes red, of a violet colour, and hot, and grows thin on the summit, and at last gives issue to a pus more or less serous; but before the disease arrives at this degree of inflammation, it proceeds more or less slowly, becomes stationary, advances, and retrogrades a number of times. The tubercles of scrofulous persons take on

suppuration but partially; hence the ulcers and fistulæ which permit the escape of portions of softened tuberculous matter. These scrofulous ulcers suppurate during a very long time, sometimes during many years, changing frequently their forms in depth and in contour, sometimes painful but most frequently indolent. New tumours often form and suppurate near those which are already in a state of suppuration; the cicatrices which are at last formed after a period of greater or less duration, are at first red, afterwards they become pale, soft, and as it were withered.

In the greater number of cases, the disease leads to suppuration, but it also sometimes terminates by resolution, particularly if it be combated in a suitable manner from the commencement.

We sometimes see tubercles develop themselves on many other parts of the body besides those pointed out; in some individuals, all the parts furnished with cellular tissue are crowded with them.

The scrofulous tumours which constitute this variety are observed at every age, but particularly in infancy. This disease ordinarily commences at the period of the first or second dentition, or a little before the age of puberty, rarely at a later period; yet we sometimes see persons of the age of thirty, forty, or fifty, affected with scrofulous tubercles. When the malady commences in infancy, and is not complicated with other internal irritations, it often terminates happily towards the age of puberty; this age, on the other hand, is that in which pulmonary tubercles most ordinarily form themselves.

Second variety—Goitre.—The name of goitre is given to an abnormal development of the thyroid gland, which makes its appearance by a tumour, more or less considerable, before the trachea.

In certain countries where scrofula is endemic, we observe in the inhabitants, sometimes, tuberculous enlarge-

ments of the glands, at other times, goitres or other forms of the disease. All these forms may exist simultaneously or separately. Thus, in the vallies of the Alps, we find individuals affected with goitre, and without other symptoms of scrofula, while others have tuberculous glandular inflammations, ophthalmia, swelled lips, chronic coryza, &c. with or without swelling of the thyroid gland. In other countries, and under certain influences of climate and regimen, scrofula always assumes the same form; for example, nothing is more common in Paris than ganglitis, rachitis, tubercular phthisis, tabes mesenterica, while we rarely meet with a case of goitre.

Although engorgement of the thyroid gland is most frequently one of the forms of the scrofulous affection, it may nevertheless supervene accidentally in individuals whose constitutions are by no means scrofulous; it is thus, without citing other examples, that efforts not unfrequently determine it in women in child-bed.

Third variety—Entero-mesenteric Irritation.—This malady, which much more frequently affects infants than adults, is recognised by the following signs: after the ordinary symptoms of gastro-enteritis or entero-colitis, the belly swells, becomes hard and sensible on being touched; in proportion to the progress of the malady, the patient is atrophied, we can perceive, through the parities of the abdomen, tumours which are rounded or uneven: these are the engorged mesenteric glands; there is excessive thirst, anorexia or voracity, obstinate diarrhœa, particularly towards the termination of the malady, sometimes, but rarely, constipation, suppuration of the tuberculous glands, hectic fever, marasmus, and death.

On dissection, we constantly find traces of inflammation on the mucous membrane of the intestines, corresponding with the engorged glands. Tabes mesenterica may appear alone, or be accompanied with one or more

varieties of scrofula. This disease may also exist accidentally, and in individuals whose constitutions are not scrofulous.

Fourth variety—Tuberculous Pulmonary Consumption.—If individuals of the scrofulous constitution have the mucous membrane of the eyes or of the nasal fossæ very irritable, they will have an ophthalmia or a coryza; if irritability predominates in the mucous membrane of the intestines, they will be affected with a gastro-mesenteric inflammation; if in the mucous membrane of the bronchia, they will be subject to bronchial catarrhs, then to irritations of the pulmonary parenchyma and to tubercles, which in these subjects are formed with the greatest facility.

Although tubercular pulmonary phthisis, *cæteris paribus*, makes its appearance more readily in individuals predisposed, it nevertheless very often supervenes without this predisposition, and under the influence of all the causes that irritate the organs of respiration. As it has been treated of in the chapter on pulmonary phthisis, we shall not return to the consideration of it. (See Chronic Pneumonia and Pulmonary Phthisis.)

Fifth variety—Rachitis.—We should refer to this variety various alterations of the osseous tissue, such as the softening of the bones and the deformities which are the consequence of it in infants, many white tumours of the articulations, and often spontaneous caries of the bones at all periods of life. Rachitis ordinarily manifests itself in children between the ages of six and seven, by some of the following signs, or by the simultaneous existence of them all: the muscles are flaccid, the visage pale, the head becomes large, the articular extremities swell, the bones of the legs become crooked, the vertebral column undergoes various deviations, the ribs are depressed, and the sternum rises to a point, dentition is slow and the teeth are shed very early, the abdomen is tense, a circumstance

which ordinarily depends upon a concomitance of an engorgement of the mesenteric glands, and there is then diarrhœa. If the vertebræ are tumefied, they affect the action of the spinal marrow, and the child cannot sustain itself on its lower extremities, or can do it only with difficulty; sometimes the affected bones become carious.

Ossification always proceeds slowly in scrofulous subjects, and the articular extremities in particular remain a much longer time bathed in liquids, soft and cartilaginous, than in other individuals. This constitution of the bones disposes them to become readily irritated, and to swell and undergo various kinds of alterations, as is proved by an observation of facts.

Sixth variety—*Ophthalmia, Coryza, Otorrhœa of Infants*.—The irritations of the mucous membranes of the eyes, of the nose, and of the ears, have been described in another place. Taken by themselves, they are not symptoms of the scrofulous affection, for we remark them frequently in children of all constitutions, but when to these signs is superadded the scrofulous habit, which a practised eye easily recognises, and which we have described above, when in infants the borders of the eyelids are habitually swelled, and obstructed with rheum, when the mucous membrane of the nose is covered with scabs, which fall off, and reappear frequently, we may regard these irritations as scrofulous. Ophthalmia depending upon this cause, as well as inflammation of the mucous membrane of the nose, is observed most frequently in infancy, but adult age is not exempt from it.

These irritations often exist simultaneously with other varieties of scrofula.

The scrofulous affection is endemic in most of the humid and low countries, in gloomy vallies, and in marshy places. In the large towns we observe it principally in individuals who belong to the more indigent classes of so-

ciety, and who are obliged to live in confined and dark quarters, where they respire a vitiated air. The absence of the light of the sun appears to have upon man an influence analogous to that which it is observed to have in plants which grow in the shade or in caves; these plants are watery, without colour, etiolated; now the scrofulous constitution is a species of etiolation, and assimilation proceeds badly; nutrition is as it were arrested. In the etiology of this malady we must also take into account its hereditary character; this does not consist, we are well aware, in the transmission, from parents to their children, of the germ of scrofula, but in the transmission of an organic disposition analogous to their own; that is, a predominance of the cellular tissue and the lymphatic system, associated with a remarkable irritation of the mucous membranes, which disposition existing, the occasional causes more readily develop the disease than when the predisposition does not exist: such is the true theory of all the maladies called hereditary.

In the greater number of cases, scrofula occurs in individuals whose constitution is disposed to this disease, but it may manifest itself in other individuals, who are exposed to humidity or cold, and who live in dark places; thus, we observe it in subjects of good constitutions, who are confined during a long time in obscure and damp dungeons, in those who inhabit mines, &c. To these causes may be added want of exercise, bad nourishment, want of cleanliness. It is observed, that the scrofulous constitution is readily contracted by those who leave a warm climate to inhabit a colder one, and also that it is often dissipated by opposite means. The appearance of the disease under one form rather than another, is accounted for by the action of the causes upon certain parts rather than others, or by the fact, that some parts are more irritable than others; thus, ganglites develop themselves prompt-

ly in the individual, who, being predisposed to the disease, exposes himself suddenly to cold or humidity; in another, the glands of the mesentery suffer engorgement; in a third, the osseous extremities swell, and are affected with caries, under the influence of an external cause often unperceived; a fourth is affected with an ophthalmia, a coryza, a chronic bronchitis, a tubercular phthisis; some patients experience all these disorders simultaneously, or at different times.

There exist, besides, other forms of the scrofulous affection, such as certain indurations of the skin, ulcerations upon different parts of the body, particularly upon the legs, tuberculous sarcocele, &c.

The scrofulous affection is by no means contagious.

Prognosis.

Tuberculous ganglites most frequently terminate by cure towards the adult age, when there is no internal complication; tabes mesenterica and tuberculous phthisis almost always terminate fatally; rachitis, if there be too active a complication of the spinal marrow, or caries of the vertebræ, is almost always fatal. If it is accompanied with tumefaction of the abdomen, this complication of entero-mesenteritis offers but few chances of cure. If there be only a development, somewhat greater than natural, of the articulations of the feet, of the knees, of the wrists, without other complication, the process of ossification may re-establish itself and the infant enjoy good health. The danger which results from caries, from articular tumours, is determined by their extent, and their seat, permitting or not the practice on these parts of appropriate operations and entrenchments. In all these cases we must take into consideration the internal organs which may be affected.

Treatment.

Prophylactic.—We may to a certain degree prevent the development of scrofula in individuals predisposed or born of scrofulous parents, by withdrawing them at an early period, from the influence of the causes which may occasion it. The most appropriate means are those which have a tendency to bestow upon the muscular, nervous, and sanguineous systems, the energy and activity in which they are deficient, and to destroy the predominance of the cellular and lymphatic systems.

Residence in the country in a pure and dry atmosphere, under the influence of the solar light, and manual exercises in the open air, hold the first rank among the curative means, and all means may be considered insufficient as long as the children who are predisposed are permitted to live in narrow, damp, dark streets, or crowded together in manufactories, hospitals, &c.; the same may be remarked of the inhabitants of vallies in which the scrofulous constitution is endemic. It would be desirable for these individuals to live, at least for some years, under a more healthful sky. A native of a warm country, if he has a scrofulous constitution, should not take up his residence in a colder climate, and even when there is no predisposition, it is not uncommon to see individuals of southern countries contract the scrofulous affection and pulmonary consumption, on removing to more northern latitudes; for the opposite reason it is very advantageous to leave a cold and humid country to reside in a warmer and drier one.

It is of advantage that the mattresses upon which the children lie contain some aromatic substances, such as fern, lavender, sage, &c. If the spine begins to be curved, we make the child lie exactly upon the point which becomes prominent. If the child who has the predisposi-

tion has already begun to apply himself to study, it should be entirely suspended, to enable him to engage with full liberty in muscular exercises.

The food should be substantial and strengthening, and should principally consist in boiled or roasted meats, eggs; fresh vegetables, and fruits perfectly ripe, are to be associated in proper proportions with the animal food. For drink, wine or strong beer is to be used. In employing this regimen, we must watch the state of the digestive organs, for we know that the mucous membranes have a great tendency to contract irritation in scrofulous constitutions, but by giving activity to the skin, to the muscles, and to the circulatory system, by means of exercise, we diminish at the same time this irritability of the mucous membranes, and if in large towns the tonic regimen has so little success, it is because the vital activity not being distributed over the muscles and skin, the mucous membranes possess it in excess, and become inflamed with the greatest facility. Certain tonics are likewise prescribed, such as the ferruginous preparations, those of quinine, decoctions of gentian, of the hop, the wine of wormwood, &c.; but these articles must not be employed except with moderation, and in cases in which the digestive organs are in a state of perfect soundness. Might we not employ iodine internally, and at distant intervals, as a means proper to prevent the formation of tubercles?

Stimulating, salt, or sulphurous baths, and dry friction, are, next to the influence of dry air, exercise, and food, one of the most advantageous means of cure, on account of their keeping up the action of the skin. For the same reason we should be careful to protect it against cold and dampness.

If local irritations, particularly of an internal kind, supervene, the tonic regimen must be suspended and replaced by emollients and a suitable regimen.

Curative Treatment.—Scrofulous tumours should be attacked at their commencement by small topical bleedings often repeated; they act then as an antiphlogistic and revulsive means, and if the external irritation is not complicated with inflammation, we may administer the tonics mentioned above, and associate this treatment with the enjoyment of free air and the other means of hygeia. But when the tumours are old, it is not possible to obtain their resolution by means of leeches; their employment would even be dangerous by augmenting the local and general weakness. We apply then to the tumours stimulants of various kinds, to induce suppuration in them; of this kind are the plasters of soap, ammoniacal liniments, the ointment of styrax, the ointments of iodine, &c. If the tumours are not yet tubercular, it sometimes happens that these applications, and particularly those of the hydriodate of potash, produce their resolution.

Scrofulous ulcers should be dressed with lint spread with cerate; if the flesh is pale, we excite it gently with cream of tartar in powder, or a brisk digestive. If they become sanious or gangrenous, we have recourse to slices of lemon deprived of their rind, to lotions of the chloride of soda, and if the ulcers are painful, we employ the opiate cerate and emollient cataplasms. When the ulcers tend to cicatrization, we must endeavour to prevent the deformities which the cicatrices leave after them, by often repressing the flesh with nitrate of silver, by cauterizing the elevations formed by the skin, and the vegetations which spring up. *Tabes mesenterica*, or entero-mesenteric irritation should be treated as chronic gastritis and gastro-enteritis; this variety, as well as tubercular phthisis, requires the internal employment of emollients. (See Gastritis and Pulmonary Phthisis.)

Rickets should be treated by the means of hygeia indicated above, as preventives of scrofula, but we suspend

the employment of internal stimulants, if irritation arises. Furthermore, we should in all cases watch the state of the digestive organs, and be determined by it in permitting, diminishing, augmenting, or retrenching the strengthening alimentation. We correct the deviations which the bones may have undergone by the employment of various orthopedic means, the consideration of which cannot find a place in this work.

The tumours of the articulations, called white tumours, should be attacked in the commencement by leeches applied to the parts, afterwards by revulsives, blisters, moxa. Absolute rest. The internal treatment should be tonic, unless contra-indicated by complications.

Scrofulous ophthalmia and coryza do not demand any specific local treatment; we pursue the same course as in the cases in which the irritations depend upon any other cause. If they are acute, local bleedings and emollients; if chronic, revulsives. The internal treatment is the same as that of other varieties of scrofula, that is, exciting or emollient, according to the state of the digestive and respiratory organs.

To sum up the treatment: free air, exercise, the light of the sun, the excitation of the skin by baths, friction, and woollen clothing, a tonic and stimulating alimentation, unless contra-indicated, form the basis of the means proper to remove the scrofulous constitution; the local inflammations, acute or chronic, internal or external, which supervene, should be treated as inflammations produced under the influence of any other cause.

PERIODICAL IRRITATIONS.

(INTERMITTENT FEVERS.)

Most of the affections which have been treated of may assume the intermittent form, but the intermittent charac-

ter is more frequent, when the irritation has its seat in certain tissues than in others. Thus the irritations of the sanguineous system which are called inflammatory, are those with which we most frequently meet under this form.

Nervous irritations likewise affect very often the periodical form.

The white or lymphatic tissues are much more rarely the seats of periodical irritation, because, the irritation once fixed in these tissues, is with difficulty displaced.

These irritations may, like the continued, be seated in all the organs; thus we see intermittent ophthalmia and erysipelas. But the most common seats of these affections are in the alimentary canal, and as in this case the seat of the disease is not so manifest as in the others, authors have made of it an essential or legitimate intermittent fever, as they also call those maladies by the name of essential continued fevers, which at the present day are recognised as being gastro-enterites.

Legitimate intermittent fever is demonstrated to be but a gastro-intestinal irritation, by the following proofs; first, there is, as in continued fevers, redness of the tongue, ardent thirst, lassitude of the limbs, augmentation of fever by the ingesta of stimulants during the access; secondly, the intermittent fever often changes into the continued, or it may be made to undergo this transformation by an ill-timed stimulating medication; and dissection then reveals the same alterations as after other chronic or acute continued gastro-enterites.

Intermittent fevers may be accompanied with diverse phenomena: thus we sometimes observe during the attack, pneumonia, violent cephalalgia, coma, delirium, convulsions, syncope, icterus, aphonia, adynamy, ataxy, vomiting, and various other alarming symptoms, which have occasioned the name of *pernicious* to be given to these

fevers. But every intermittent fever at a very high degree may become *pernicious*, as every violent continued fever may promptly assume the adynamic, ataxic, putrid, or typhoid form.

Authors give the name of masked fevers to external intermittent irritations, such are a nasal hæmorrhage, a hæmoptysis, an erysipelas, a cutaneous eruption, a rheumatism, &c. with a periodical form. But these irritations are the least masked of all; they are only external local irritations, which are intermittent instead of continued. They are often complicated with internal, and particularly gastro-intestinal irritation, or they are an effect of it; this is a circumstance likewise which we often observe in continued irritations. When the external intermittent irritation exists without internal complication, the phenomena are confined to local inflammation, provided it be not very violent; but if there is at the same time intestinal irritation, we have all the ordinary symptoms of the legitimate intermittent fever of authors, with the external local affection superadded. In one word, intermittent irritations sometimes develope febrile phenomena, and this most frequently happens; at other times they do not develope them: this is also the case with continued phlegmasiæ.

According to this theory, the proofs of which the limits of this work will not permit us to detail, we may establish the following propositions:—

1st. The intermittent fevers called *legitimate*, are periodical gastro-enterites.

2d. *Pernicious* fevers are irritations of the same nature at a very high degree, or at the same degree, but in a very irritable subject, or finally with complication of irritation in important organs.

3d. Masked fevers are nothing but external intermit-

tent irritations, sometimes without and sometimes with fever; in the latter there is more frequently intermittent gastro-enteritis, which again may be legitimate or pernicious.

Periodicity does not exclude the idea of irritation, as some authors pretend to assert; we see, on the contrary, that in the physiological order, most of our functions are performed with a certain periodicity, the result of a sur-excitation of the organs which execute them, such are hunger, the alvine evacuations, sleep, the menstrual discharge, &c.

Periodical, like continued irritation, is composed of a fluxionary movement towards the irritated organ, but in continued irritation the congestion is permanent; in place of which, in the intermittent, a reaction is established towards the periphery of the body, and the equilibrium is re-established. If the congestion is very violent, and particularly if it occurs in very important organs, death may supervene very promptly. These are the cases of *pernicious* fever. If the congestion is often repeated, the organs at last retain the irritation, and we have continued fever, or they undergo remarkable alterations of structure, and principally congestions, as we observe in the spleen and the liver, in the sequel of intermittent fevers of long duration.

This theory of intermittent fevers is far from being admitted by all physicians; many have no theory upon the subject. Some, *a priori*, make them depend upon a modification of innervation produced by deleterious causes, and principally by paludal emanations acting upon the nervous centres, and especially upon the spinal marrow, after the manner of certain poisons. Admitting, with these authors, the influence of marshes as the occasional cause, which is incontestible, we believe their opinion upon the nature of the fever to be a pure hypothesis, con-

firmed neither by an observation of phenomena, nor by dissections.

Every periodical febrile irritation embraces two principal periods—that of the *access*, and that of the *apyrexia*, or the interval without fever, which exists between each two successive accesses.

The access is composed of three principal phenomena, which are named stages—the cold, the hot, and the sweating stages. The cold stage results from the rapid afflux of blood towards the irritated organ; the hot and the sweating stages are the effect of a reaction of this organ, which throws back the blood on the periphery of the body which it had abandoned.

We give the name of type to the order which the attacks observe in their return—if the attack returns every day, it is the quotidian fever; if every other day, it is the tertian fever; if every sixty-two hours, it is the quartan fever, and so forth; these three types are the most common, and we rarely meet with the quintan fever, the sextan fever, &c.

The fever is called intermittent when the apyrexia is complete; remittent, when it is incomplete; that is, when the morbid phenomena do not completely cease, but only abate in intensity between the attacks; subintrant, when the attacks encroach upon each other; in this case, the cold stage recommences before the sweating stage has terminated.

Fevers are called atypic or erratic, when the return of the attack is irregular; abnormal, when the attack is not composed of all the stages, but either the cold, the hot, or sweating stage is wanting.

Every *legitimate* periodical irritation, if it is exasperated by the treatment, or by the influence of causes continually acting, may be changed into the remittent or subintrant, and this again into the continued form; in the

same manner may an appropriate treatment cause the remittent form to assume the intermittent, which is always an amelioration.

The most common causes of intermittent fevers are, beyond a doubt, the influence exercised upon the economy by marshes, by the vicinity of ponds, lakes, rivers and canals, whose borders remain always dry, stagnant pools, forests, common sewers, ports of the sea badly cleaned, by hot and rainy seasons, &c. &c. These causes exercise their influence so much the more readily, as individuals are badly nourished, are fatigued, or are affected with a chronic malady. The presence of foreign bodies in the economy, such as worms, calculi, and the moral affections, have also been placed among the number of causes determining this disease, but these causes are extremely rare, compared with the influence of marshes.

Symptoms of the Intermittent Fever called Legitimate—Cold stage.—Pandiculation, lassitude of the limbs, sense of pain and malaise in the arms, and sometimes in the extremities of the fingers; this is succeeded by shivering and chattering of the teeth, produced by a sensation of cold, in the lumbar region at first, but afterwards pervading the whole body, nausea or vomiting, embarrassed respiration, pulse small and accelerated, redness of the tongue, dryness of the mouth, thirst, limpid urine.—*Hot stage.* After the lapse of a period varying in duration, the sense of cold is dissipated by degrees, and is replaced by heat of a dry, pungent kind, more or less intense; the skin is burning, and the urine high-coloured; the pulse full, strong, and hard; the mouth is dry and the thirst extreme; there is violent cephalalgia, sometimes accompanied with wandering of the mind.—*Sweating stage.* When the heat has arrived at a degree which is sometimes excessive, it is at last replaced by abundant sweats, and by a gradual diminution of all the symptoms;

the sweating stage having terminated, the patient finds himself in his natural state, with the exception of a sense of lassitude, which disappears more or less completely during the apyrexia. The duration of a complete access varies from six to twelve hours.

Symptoms of the Intermittent Fever called Pernicious.—To the preceding symptoms are added sudden prostration of strength, as in adynamic and ataxic fevers; or there supervene some other violent and dangerous symptoms, of which we have spoken above. According to the predominance of some particular symptom, authors give these fevers a particular name; thus they have pernicious fevers, which they call pneumonic, pleuritic, cardialgic, syncopal, exanthematous, comatose, convulsive, epileptic, &c. &c.

The symptoms of masked fevers vary according to the seat of irritation; thus we have ophthalmia, nasal hæmorrhage, hæmoptysis, erysipelas, periodic neuralgia, &c. During the access, every thing resembles the continued irritations. These irritations exist with or without fever, according as there is or is not gastro-intestinal irritation, either primitive or consecutive.

The symptoms of remittent fevers are the same during the attack as those of intermittent fevers; the difference is that the apyrexia is not complete in the former; this has given occasion to certain authors to assert that these were cases of continued fever with the addition of intermittent fever; this opinion is absurd. There is remission and not complete intermission, because there exists permanently a point of inflammation.

Prognosis.

The intermittent fevers called legitimate, are removed with considerable facility, if they are recent, and have not yet produced organic disorders of an important cha-

racter, &c. The quotidian and tertian fevers are in general more easily cured than the quartan. The intermittent fever with a *pernicious* form, proceeds rapidly to the fatal termination, the danger increases at every access, and it often terminates in death during the third, fourth, or fifth attack. The fevers called masked, are attended with but little danger, when the external irritation exists without internal complication; when this complication exists, the prognosis is based upon it, and is consequently that of legitimate and pernicious fevers.

Intermittent fevers often transform themselves into remittent, and then into continued fever; they may determine different organic alterations, sanguineous congestions, engorgements of the liver, of the spleen, &c. dropsies, aneurism.

Treatment.

In the fevers called legitimate, we commence by calming the irritation by means of topical bleeding and emollient drinks, especially when the subject is strong and plethoric; when the irritation has diminished, we administer bark, and principally the sulphate of quinine, during the apyrexia, and never during the attack. The quantity of the sulphate is from six to twelve grains, divided into doses of two or three grains, and taken during each apyrexia.

We should also continue its employment during some time after the attacks have ceased, and diminish the doses by degrees. In want of the sulphate of quinine, we give the bark in decoction rather than in powder.

The most proper time for the administration of the febrifuge remedies, is three or four hours after the attack has entirely terminated, but we must not forget that the apyrexia must be complete to allow the employment of this medicine.

Many stimulating and tonic substances have in their turn been proposed as succedaneous to quinine and its numerous preparations, but the quinine merits hitherto the preference, because it produces, with more certainty than any other medicine, upon the intestinal canal, the modification, the stimulation, or perhaps the counter-irritation proper to break up the periodicity, and prevent the return of the attack. These substances are almost all the bitters, as the wormwood, the willow, the oak, the drupe of the walnut, &c.; arsenic has also been employed, as well as opium, musk, camphor, white wine, gunpowder. The attacks have sometimes been prevented by means of ligatures applied upon the limbs, to intercept the venous circulation, and prevent the afflux of blood towards the viscera.

Moral impressions have sometimes produced a cure when all other means have failed; it is to these impressions that the effect of amulets and of disgusting substances, such as spider's web, urine, fæces, the wood-louse, &c. must be attributed. An instance is quoted of a young man who was cured, after all other means had been exhausted, by a fit of anger which had been designedly provoked.

The treatment of *pernicious* fevers does not differ from the preceding, except that it ought to be much more active, on account of the danger attending a return of the attack. If there is violent congestion of the lungs, of the brain, of the liver, or inflammation of the organs of digestion, we must have recourse to a copious abstraction of blood during the attack, and prevent its return by the administration of the preparations of bark in high doses.

Remittent fevers should be brought to the intermittent state. We obtain this object by the antiphlogistic treatment, blood-letting, rest, and diet; these means always diminish the remittent character, and bring back the fever

to the legitimate intermittent character. This having been accomplished, we give febrifuges during the apyrexia, as in the preceding cases. If the fever becomes continued, the treatment is the same as that of common continued fever, that is to say, it is antiphlogistic. (See Gastro-enteritis.)

In the fevers called masked, whenever the intermittent irritation is without fever, we may administer bark internally without hesitation, and at all periods, because there exists no gastric irritation; but if there is fever we pursue the same course as in legitimate intermittent fever.

General Rule.—To obtain a solid cure of intermittent fever, we must combat the two elements that compose it, the sanguineous congestion and the periodical movement which produces it. For this purpose we exert ourselves first to procure the cessation of the sanguineous turgescence, and the accidental complications: we obtain this end by local or general bleedings, more or less abundant, according to the case, but we dispense with the abstraction of blood if the congestion is moderate: this object being attained, we can conquer the periodicity by means of quinine.

DROPSIES.

Dropsy, which is more frequently a secondary affection, is characterized by the presence of a serosity, which is exhaled and afterwards absorbed in the normal state, but which in the morbid state remains, and accumulates in the diverse cavities lined by the serous membranes, or in the synovial membranes or the cellular tissue. This accumulation presupposes either an absorption very much diminished, or a secretion very abundant. The secretion of serosity is augmented in certain irritations, which group themselves below the phlegmasiæ; absorption is diminish-

ed in certain cases of debility, and by the existence of certain obstacles to the circulation of the blood and other fluids.

Symptoms.

Dropsy is general or local. It is so easily recognised that it is useless to enter into a detail of all the signs that characterize its existence. General dropsy is called anasarca, local dropsy receives different names according to the seat which it occupies. That of the brain is called hydrocephalus, that of the thoracic cavities, hydrothorax, and hydropericardium; that of the cavity of the abdomen, ascites; that of the spinal canal, hydrorachis; when the serosity is accumulated in a cyst developed by a morbid process, it is called encysted dropsy, &c.

When dropsy takes place rapidly, the skin is not ordinarily doughy, nor does it retain the impression of the fingers; the contrary is the case when it is developed slowly, which usually happens.

General dropsy usually commences in the inferior extremities. Partial dropsy, on the contrary, commences in or near the particular place in which the cause exists; but in some cases we do not suspect it until warned of its existence by œdema of the feet and eyelids. Partial dropsy is often complicated with anasarca, particularly at an advanced period.

Dropsy of the brain is not primitive or essential; it is always the result of an irritation of the serous membranes which invest it. The symptoms are those described in the articles on cerebral irritations and arachnitis of infants.

These remarks are applicable likewise to dropsy of the cavities of the chest; there is not perhaps a well attested example of primitive hydrothorax; the disease depends upon an inflammation of the pleuræ, or upon the existence

of an obstacle to the circulation, having its seat in the heart or the lungs. If an exhalation of serosity should occur as a consequence of arrested transpiration, or of cold drinks taken in large quantities, without any diseased complication, the effusion would soon be absorbed.

The peritoneal is, of all the cavities, the one which is most frequently the seat of dropsy. The swelling of the abdomen, and the movement of fluctuation which percussion occasions, leave no doubt as to the diagnosis; in addition to this, it is not long before œdema of the inferior extremities and anasarca supervene. Ascites is distinguished from tympanitis by the tumefaction not being elastic and sonorous in the former as it is in the latter. .

This dropsy is but seldom primitive; it is more frequently occasioned by a peritonitis, or by an obstacle to the circulation, produced by an engorgement of the liver, of the spleen, of the ovaria, or of the mesenteric glands.

The encysted dropsy, which develops itself between the abdominal muscles and the peritoneum, is distinguished from peritoneal ascites by the fact, that the swelling, at first partial and gradual, occurs in one of the sides of the abdomen, and increases in an unequal and irregular manner; the functions are but little, or not at all altered, and the face is neither pale nor bloated, except in the last stage of the disease. Dropsy of the ovarium is not always easily recognised; we find a tumour more or less considerable in size in one or both sides of the hypogastric region, attended with little pain, developing itself slowly, presenting sometimes fluctuation, a slight œdema of the inferior extremities, sometimes oppression; menstruation is irregular, the general functions are not troubled, except towards the latter stages of the malady.

Dropsy of the cavity of the uterus has often been confounded with pregnancy, or with engorgement of this viscus; yet there is perceived through the parietes of the ab-

domen, if an attentive examination be made, an obscure fluctuation, which however is sufficiently manifest to the touch; in practicing the "ballotement," the finger, placed upon the neck of the uterus, is not struck by any solid body; after the lapse of some months, the absence of the movements of the infant remove all idea of the existence of pregnancy. In certain cases we find hydatids in the uterus, or we find one or more cysts filled with a purulent serosity, which is extremely fetid. This dropsy is always an effect of a chronic inflammation, or of an organic affection of the uterus.

The same is the case with regard to encysted dropsy of the liver, the diagnosis of which is very difficult, as the fluctuation is very obscure, and the pale complexion, the oppression, the dull pain, and the elevation of the right hypochondrium, may be equally produced by engorgement of the liver, without any accumulation of fluids.

Encysted dropsies may also occur in various other parts of the body, as in the epiploon, the mesentery, the spleen, &c.

Causes.

The predisposition to dropsy consists in a considerable development of the lymphatic system, with a deficiency of activity in the sanguineous system; weak and exsanguious constitutions are most exposed to it. Although of more frequent occurrence in infancy and old age, yet all periods of life, as well as all temperaments, are liable to the disease. Its occasional cause is sudden suppression of the cutaneous transpiration; it then becomes necessary to the maintenance of the equilibrium, that the kidneys and lungs discharge what the skin ceases to evacuate; but it sometimes happens that the action of exhalation is transferred to the serous membranes or the cellular tissue, instead of these viscera, and the sudden supervention of

dropsy from the impression of cold is then the result. It is also by diminishing cutaneous action, that a humid atmosphere concurs in the production of this disease. Irritation of the viscera may occasion a rigor, which produces dropsy in the same manner, by the afflux of serosity which takes place from the surface to the interior. Similar effects are produced by the attacks of intermittents. Terror or horror may act in the same manner. The ingestion of a great quantity of fluids often determines dropsy, particularly if they are taken cold while the body is heated.

Sanguineous plethora, as the experiments of Majendie show, sometimes produces such embarrassment in the economy, as to prevent the process of absorption, and thus may give rise to dropsy.

Inflammation of the serous membranes that line the different cavities of the body, as the membranes of the brain and spinal marrow, the pleuræ, the peritonæum, the pericardium, are very common causes of dropsy.

It may likewise be produced by the inflammation of the viscera contained in these envelopes, as this inflammation may extend to the serous membranes and produce derangement of their functions.

The most common causes are obstacles to the circulation, situated most frequently in the heart and in the great arterial trunks. Dropsy from this cause does not arise from superabundant exhalation, but from a real difficulty of absorption. We should partly refer to this cause dropsies which are co-existent with inflammatory or sub-inflammatory tumours of the liver, of the spleen, of the womb, and of the ovaria.

Dropsy is sometimes produced by the too copious abstraction of blood; the tissues from this cause become relaxed, the blood less rich in fibrin, and effusion consequently more easily occurs. This is not, however, so frequently a cause as is usually said; on the contrary, blood-

letting usually diminishes plethora, whether general or local, and thus facilitates absorption; on this account, blood-letting is, in a very great number of cases, the best remedy of dropsy.

Food of a bad quality, or deficient in quantity, may be the cause of this disease, as has been observed in years of great scarcity.

It may be occasioned by the abuse of purgatives, and of alcoholic drinks, which produce irritation of the alimentary canal.

Dropsy has been divided into active and passive. To speak with rigorous accuracy, there are no passive dropsies, except those which depend upon excessive loss of blood, on bad nourishment, and on the existence of obstacles to the circulation; which obstacles, as they are really the result of chronic inflammations, are more deserving of the attention of the physician than the dropsy itself.

Prognosis.

Dropsy, if a primitive affection, sometimes disappears spontaneously by a copious evacuation of urine, an abundant perspiration, or a diarrhœa. This has brought into vogue so many articles of the *materia medica* in this disease, such as diuretics, sudorifics, and purgatives. Cures have sometimes been obtained by the employment of these stimulants, even when dropsy has depended upon an inflammation; absorption occurs, but it is sometimes at the expense of a violent inflammation, which carries off the patient.

When there is profound organic derangement of the viscera, much reliance is not to be placed on remedies, no matter of what kind they may be. If the skin is doughy, and retains for a long time the impression of the fingers, the case is serious. The œdematous tissues sometimes take on inflammation and become gangrenous.

Treatment.

Variable, according to the cause, the degree, the duration, and the complications of the disease. It may be established as a general rule, that if the effusion is the effect of acute, or which is more frequently the case, of chronic inflammation of the viscera, the treatment should be that of these affections. Thus, if there is gastro-enteritis, hepatitis, peritonitis, pleurisy, pericarditis, arachnitis, tumours of the liver, of the ovaria, or of the womb, these different affections must be combated by appropriate measures, generally by the antiphlogistic treatment.

In a robust and plethoric subject, in whom dropsy is dependent upon too copious an exhalation of fluids, unaccompanied with lesion of structure, we employ venesection to promote activity of absorption; we then administer diuretics, commencing with the mildest. In all cases in which the effusion is sufficiently abundant to admit of paracentesis, without danger of wounding the intestines, we must resort to this operation early, as by this means diuretics are enabled to act more favourably, and as the difficulty attending absorption is greater in proportion to the quantity of serosity that has been effused. We evacuate likewise the water contained in the cavity of the pleura, and in the other cavities which allow of the operation. The action of the skin is to be excited by dry vapours, by the vapour of aromatic and alcoholic articles, by dry friction, by the patient exposing himself to the influence of the sun, and by his avoidance of cold and dampness.

When dropsy depends upon loss of blood, or an exsanguious condition of the patient, or is produced by privations and defective nourishment, we not only use diuretics, but also tonics, such as iron, chalybeate wine, preparations of cinchona, and particularly food of a good quality, at the same time that we carefully watch the alimen-

tary canal. If the patient had been for a long time upon a poor diet, we should not be in haste to exchange it for a very substantial mode of living; but commence by giving him milk, the juice of fresh vegetables, cooked fruits, and gradually put him upon the use of more nourishing articles.

Drastic purgatives either cut short the disease, or give it redoubled intensity. Purgatives of all kinds should be proscribed, wherever there exists irritation of the *primæ viæ*.

Among the diuretics, the juniper-berry, the strawberry, the dog-grass, the bugloss, and the elder-bark, are particularly recommended; the decoctions of these substances may be rendered more active by the addition of three or four drops of the tincture of cantharides, or fifteen, twenty, or thirty grains of the nitrate of potash to the pint. We likewise employ squills, the wine of squills, muriatic or citric ether, mixed with water, Seltzer water, iodine in friction, or internally. Digitalis does not possess a diuretic property in so high a degree as is generally supposed, but it is of great utility when dropsy depends upon a disease of the heart.

White wine acidulated, and alcohol diluted with water, punch, &c. are sometimes administered. But all these remedies being more or less stimulating, more or less irritating, require during their employment attention to the state of the intestinal canal. Encysted dropsy is often beyond the resources of art, especially if its situation does not permit the evacuation of the fluid, but should this be practicable, a cure may be obtained.

SCORBUTUS.

This disease is characterized by a remarkable fluidity of the blood, which is readily effused into the subcutane-

ous cellular tissue, and produces livid spots on the skin; by frequent hæmorrhages, by vomiting, and by bleeding of the gums.

Symptoms.

General lassitude, aversion to motion, prostration of strength, pale and bloated face, tendency to syncope, occasioned by the least movement, palpitation of the heart, and wandering pains in the muscles, are the first symptoms that point out the disease; the gums are livid and spongy, they permit the escape of a very thin blood, and become ulcerated; the teeth become denuded and loose, the breath is intolerably fetid; the skin is at first dry and harsh to the touch, but in a short time large livid blotches as well as fetid ulcers appear on different parts of it, and particularly on the lower extremities; if the disease has deeply tainted the system, hæmorrhages occur from different parts of the body, from the mucous membranes of the mouth, the nose, the vagina, the intestinal canal, and sometimes even from the ends of the fingers; the blood poured forth in the hæmorrhages is to a great extent deprived of its fibrine, and does not coagulate. There is generally obstinate constipation throughout the disease, sometimes the contrary is the case, and we observe a diarrhœa attended with flatulency.

Cold and dampness, want of vegetable food scarcity, of provisions, and dejection of spirits, are, when united, the causes which generally produce the scurvy. It does not appear that any of these causes separately can produce the disease. The exclusive use of salt provisions contributes to its production, but experience proves that it cannot alone give rise to it.

The proximate cause, or rather the nature of scurvy, consists in a relaxation of all the tissues, and in an altered state of the blood, which becomes more serous and less

rich in fibrine. Among modern physicians, there are some who regard this alteration of the blood as primitive, or, as they say, essential; others make it depend on a morbid state of the solids; we coincide in opinion with the latter, for reasons which it would occupy us too long to state in this work. This disease is, at the present time, of very rare occurrence.

Prognosis.

The progress of this disease is either rapid or slow, which has occasioned its division into acute and chronic; its duration is indefinite; its termination may be favourable, but in this case convalescence is generally slow.

Treatment.

In the first place, the removal of the occasional causes; food consisting of vegetables, fruits, and fresh meat; acidulated drinks, and particularly lemonade; the use of beer made with hops; the martial preparations. Very favourable results have been obtained from the employment of the vegetable astringents, and particularly from a mixture of equal parts of lemonade and the decoction of rhatany; oak-bark, bistort, tormentil, the root of the pomegranate, would, without doubt, produce the same effects. These various astringents act with sufficient promptness in arresting the hæmorrhages, whether subcutaneous or from the mucous membranes.

The ulcers of the mouth should be washed with the decoction of mallows, and afterwards one of the preceding decoctions may be used; constipation may be obviated by means of emollient lavements; the patient must respire a pure air in a dry and temperate atmosphere.

What shall we say of the antiscorbutics? We read in the annals of science, that the crew of a ship, suffering

with scurvy, put into a northern island, and there eat largely of cresses, and were cured. But in that island this plant is mild, and not acrid, as in our climate, and those of a more southern latitude; it therefore had the common effect of fresh and mild vegetables. In our climate, the so called antiscorbutics are rather hurtful than beneficial in scurvy. This disease, although its nature is not well defined, particularly forbids blood-letting.

SYPHILIS.

Symptoms.

Syphilis, or the venereal disease, is composed of symptoms so numerous and varied, that it would be difficult to present a detailed account of them in a work like the present. All or most of the symptoms of syphilis, are rarely, perhaps never found united in one individual; one or a few are sufficient in the greatest number of cases to point out the existence of the malady.

This disease is less violent in its ravages at the present day than it was at no very distant period, either owing to the rules of hygiene being better understood and acted upon, or to greater carefulness or a more rational treatment. Whatever may be the fact, the symptoms by which it is recognised are those which we are about to describe. There are primary symptoms which make their appearance upon the parts which have been in contact with the contagious matter; these are a flow of matter, chancres, mucous pustules, and but rarely vegetations on the sexual apparatus, sometimes buboes.

When these affections, after having disappeared spontaneously or owing to treatment, reappear, or are replaced at a later period by other phenomena, there results a series of symptoms, to the group of which has been assigned the name of secondary syphilis.

The disease has further been divided into 'simple consecutive or secondary syphilis, and into constitutional syphilis. The first appears in a short time after the disappearance of the symptoms of invasion. The second not until some months have elapsed. The symptoms of consecutive syphilis are ulcers, which reappear upon the sexual parts, others which supervene in the throat, on the lips, in the nasal fossæ, sores between the folds of the inferior extremity of the rectum, on the hands, about the toes, inguinal or axillary buboes, wet pustules on the margin of the anus, on the vulva, cutaneous pustules covered with scabs, and dry, or suppurating, of various form and aspect, excrescences and vegetations on the parts of generation, pains in the bones exasperated during the night, periostosis, exostosis. These tumours, which are hard, more or less round, and painful upon pressure, are remarked particularly upon the bones that are but slightly covered by the soft parts, such are those of the cranium, the sternum, the clavicles, the tibia, the cubitus; there afterwards supervene caries, necrosis, nodes, articular concretions, gummy tumours, violent head-aches, inflammation more or less acute of the conjunctiva and iris, sarcocoele, alopecia, the loss of the nails, laryngeal phthisis, and an infinite number of other irregular symptoms, which contribute to bring on debility, marasmus, and death.

Causes.

It is communicated by mediate or immediate contact to the genital parts, to the anus, to all the external openings of the mucous membranes, as well as to the skin deprived of the epidermis. Coition is the most usual means of its communication.

Does there exist a virus *sui generis*, which infects the economy? As to the primary symptoms, it is certain that similar ones may be produced by a great number of irri-

tating substances: thus, for example, by irritating the canal of the urethra with a solution of ammonia, we may give rise to a gonorrhœa, to buboes, or to a sarcocele, and all the symptoms in this case are as though the disease had been produced by the contact of persons labouring under syphilis. In fact, the matter of gonorrhœa likewise developes sometimes a discharge from the urethra, sometimes a chancre, and sometimes a bubo, as numerous and incontestible observations demonstrate. Without prejudging the question yet under litigation of the existence of the syphilitic virus, we may assert the following propositions as settled: first, the primitive symptoms of the venereal affection may be produced by other irritants besides the matter of infection; second, the secondary symptoms are very often the effect of the treatment, and particularly of the administration of mercury. We can indeed produce at pleasure all the symptoms of constitutional syphilis, by means of the mercurial preparations, in animals and individuals who have not exposed themselves to contract it; third, that the cures obtained by sudorifics are, in a great number of cases, the result of the relinquishment of the mercurial treatment, for which these substances and the antiphlogistic regimen have been substituted; the cures operated by the preparations of gold and other remedies, where mercury had failed, are also due in all probability to the abandonment of the last metal; fourth, that complete and permanent cures of the primitive affection can be obtained by a well-directed antiphlogistic treatment, and that consecutive syphilis is often cured by this same treatment, either alone, or conjoined with a mild temperature and sudorifics.

Notwithstanding these observations, it is certain, on the other hand, that the mercurial preparations are efficacious in a great number of cases, provided they be not abused. But to explain the effects of this agent, it is not necessary

to suppose the existence of a virus which it destroys; it is sufficient to admit that it modifies, in an advantageous manner, the abnormal action of the diseased tissues, since it likewise produces happy effects in various glandular engorgements, in certain affections of the skin, of the cellular membrane, &c. where there is no suspicion of a virus.

Treatment.

If we have to treat only a discharge from the urethra, recent or ancient, or a swelled testicle, or, as it is vulgarly named, the venereal testicle, we are to follow the precepts laid down in the sections upon irritations of the genital apparatus of man. Recent bubo should be treated like every other phlegmonous inflammation, that is, vigorously from the commencement, by local bleeding, more or less frequently repeated, rather copious than otherwise, by emollient cataplasms, and the long-continued application of ice, if the subject is robust, and not of an irritable constitution, complete rest, and abstinence, or a very light regimen. These means generally succeed in producing a resolution of the inflammation, but if, notwithstanding this treatment, the tumour suppurates, we let out the pus early, and afterwards dress it as we would any simple ulcer. It has been proposed to destroy at once, at their commencement, the chancres which make their appearance upon the gland and the penis in men, and the labia pudendi in women, by the *ectrotic* method, which consists in cauterizing, with the nitrate of silver, the kind of vesicular elevation, which precedes the solution of continuity, called chancre; even the latter may be treated in the same manner if it does not occupy too great an extent; in every case it is proper to use local and general warm bathing, demulcent and slightly sudorific drinks, and sometimes topical mercurial applications.

If the disease is inveterate and constitutional, it should be inquired whether the patient has used mercury to excess, and should this be the case, it will generally suffice to leave it off and replace it by sudorific drinks, such as the decoctions of sarsaparilla and guaiacum, for the purpose of gradually eradicating the disease. If the mercurial preparations have not been abused, they may be associated with the preceding decoctions; the deuto-chloride of mercury is the preparation preferred by nearly all physicians as being the most commodious and the most active. The dose is about a quarter of a grain, morning and evening, usually dissolved in distilled water. The mean duration of this treatment is from forty to sixty days; it must be suspended if there arise any disagreeable symptoms in the alimentary canal. Warm bathing, that of the thermal waters, and a warm atmosphere are of great service in the treatment of this disease, by increasing the action of the skin. Cold on the other hand obstructs the cure; it is on this account that the disease is more obstinate in northern than in southern latitudes.

There is in Guinea and in many parts of America, a disease called the *pian* or *yarws*, which attacks the negroes principally; it appears to have much analogy with syphilis, and is probably only a variety of it. It requires the same treatment as syphilis.

INTESTINAL WORMS.

The intestinal canal sometimes becomes the habitation of different species of worms, the presence of which produces such a diversity of symptoms that it would be very difficult to enumerate them all. The local irritation which they determine in the intestinal canal, may produce colics more or less violent, convulsions, aphonia, attacks of epilepsy, hysteria, nymphomania, satyriasis, diarrhœa, vo-

miting, disgust for food, voracious appetite, fever, &c. All these different phenomena are in proportion to the irritability of the patient, varying with age, temperament, constitution, &c. Every other irritation of the intestinal canal produces effects very similar to these, giving rise to few secondary or sympathetic phenomena in indolent and lymphatic constitutions, but on the contrary, developing many in nervous and irritable subjects, who are of a thin habit. To speak correctly then, there are no really pathognomonic signs of the presence of worms in the alimentary canal, except the evacuation of them whole, or in fragments, by stool or by vomiting. Nevertheless, beside this symptom, which removes all uncertainty, there are many which, when they occur together, may, to a certain extent, indicate their presence. These symptoms are the following:—

Dilatation of the pupils, dimness of sight, livid circles round the eye, itchiness of the *alæ nasi*, livid tint, grinding of the teeth, agitation during sleep, tingling of the ears, sour breath, disgust for food, a voracious appetite, hiccup, salivation, nausea, vomiting of acid matters, borborygmus, colics, diarrhœa, tenesmus, sometimes tumefaction of the abdomen, deliquium, subsultus tendinum, and involuntary movements, horripilation, sometimes a penetrating or a dull pain in some point of the intestinal canal, a feeling of relief and comfort after the expulsion of one or more worms, in some cases emaciation. To this series of symptoms are added the sympathetic phenomena enumerated above.

Besides these general symptoms common to all species of worms, authors mention some which are peculiar to each kind, but itchiness at the anus considered as symptomatic of the ascarides, the pungent pain and sensation of creeping in the intestines attributed particularly to the lumbrici, the sensation of something revolving in the in-

testines, the undulation of the abdomen, and the voracious appetite said to be pathognomonic signs of tænia; these symptoms, we say, are not peculiar, and may be determined by all the species of entozoaria, and, we repeat it, there are no pathognomonic signs of worms in general and of their species in particular, except their expulsion in the alvine discharges, or by vomiting.

The *Ascaris vermicularis* is fusiform, from three to nine lines in length, with an obtuse head, and terminating in a very fine and transparent tail. The *Ascaris lumbricoidis* resembles closely the earth-worm in its form and size, which varies from three or four inches to ten or twelve; its colour is whitish. It is impossible that the tænia should be confounded with any other intestinal worm, on account of its length, which is sometimes astonishing, and may extend from eighty to one hundred feet. Two species of them have been distinguished: the *Tænia armata*, or the *Tænia solium*, or *Tænia a long anneaux* of Cuvier; and the *Tænia non armata*, or *Tænia lata* or *vulgaris*. The diameter of the body of the first varies much, according to the point at which it is examined; towards the head it is about a quarter or a third of a line, but it augments progressively to three, four, or even six lines. It may also vary much in thickness, and sometimes it is even sufficiently thin to become transparent. The articulations of this tænia, detached from each other by any accident, and passed in the alvine dejections, have given rise to the name *cucurbitinus*. The *Tænia armata* is uncommon in France, but sufficiently common in other parts of Europe. The *Tænia lata* is flat, thin, whitish, or of a clear gray. Its head is elongated, and divested of the crown of holders which surrounds the mouth of the preceding species. It attains nearly the same length as the preceding, but its breadth is sometimes nine or ten lines or even an inch. This species is found

very frequently in France, Switzerland, Russia, and Poland. Although more difficult to destroy, this species occasions less pain than the *Tænia solium*.

The *Tænia armata* and the *non armata* are never found in the same persons; but notwithstanding its common name of the solitary worm, we sometimes find two, sometimes three, and even a greater number of the same species.

Their mode of development in the human body is little known. They are observed at all periods of life; the ascarides, however, torment infants more particularly, and those especially of a lymphatic constitution; the lumbricus and tænia is generally met with in adults, and particularly in persons of an indolent, lymphatic temperament, in those whose constitutions are debilitated or broken down by long disease, in the poor who are badly fed, and oftener in females than in males.

Treatment.

Should there exist an intestinal phlegmasia, we first endeavour to cure this affection, or others which might contra-indicate the administration of anthelmintics, all of which are irritants to a greater or less extent. (See Verminous Fever.) To effect the expulsion of the ascarides and lumbrici, the following anthelmintics are generally employed: the helminthorton, in a decoction made with from two drachms to an ounce in two or three glasses of water; the artemesia judaica taken in powder, in doses varying from twenty grains to a drachm, or in an infusion with from two to four ounces to a pint of water; two or three drachms of the artemesia judaica, incorporated with honey or sweetmeats, and given in several doses, is the remedy most resorted to in the case of infants, and seldom fails; the sandal wood administered in the same manner, and in the same proportions; the proto-chloride of

mercury, from four to ten grains, divided into several doses. We may likewise use St. John's wort, the coralina officinalis, tin, the mulberry tree, garlic, the peach tree, tansy, castor oil, southern wood, wormwood, &c. But these vermifuge medicines succeed but very rarely against the tænia; we must always in this case employ the most powerful remedies of this class. Many species of anthelmintics have been recommended; the selection, the quantity, and time of administering them, must be regulated by the degree of local irritations, and by the sympathetic lesions. We shall pass over the numerous preparations cried up as remedies in different periods, and by different physicians, and be content to point out the treatment generally adopted at the present day.

Bark of the Pomegranate tree.—The fresh bark of the root of this tree is employed in decoction, made with one or two ounces for three or four glasses of water. The worm is generally voided after the second glass, sometimes after the first.

The Male fern.—This is administered in many ways. M. Bourdier gave in the morning a glass of a strong decoction of this substance, with the addition of a drachm of sulphuric ether, (the quantity of ether is much too great, and should be reduced to one-half;) an hour after, he prescribed one or two ounces of castor oil; he repeated this treatment the next day, or two days after, if the first dose proved unavailing.

M. Alibert prescribes the following decoction, to be taken by the glass at dinner, and for the ordinary drink:—Root of the male fern, four drachms; water three pints, boiled down to two; add syrup of coralline, two ounces. Three hours after the meal, three or four grains of calomel incorporated with conserve of roses are administered. On the ensuing day the following purgative is prescribed:—Scammony in powder, eighteen grains; root of the male

fern pulverized, one drachm; gamboge and calomel, of each, twelve grains; to be taken in three doses. The remedy should be modified by a consideration of the age of the patient, and particularly the state of the intestinal canal.

The remedy of Madame Nouffler consists in giving some panada to the patient in the evening, and the next morning administering three drachms of the pulverized root of the male fern in a decoction of the same. Two hours afterwards a purgative bolus is administered, composed of ten grains of calomel and scammony, and six grains of gamboge, incorporated with confection of hyacinths. This purgative is evidently too irritating, and if the tænia be expelled, it is at the expense of the mucous membrane of the intestines. Fresh castor oil is advantageously substituted for it. The treatment employed against tænia being always very irritating, it is expedient to put those who have been subjected to it on mucilaginous drinks and a mild and vegetable regimen during a few days subsequently to its administration.

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